Lectures
ON THE
PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

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LECTURE I.—PART II.

ON A GREAT VARIETY OF FORMS OF PARALYSIS DUE TO DISEASE IN ONE SIDE OF THE BRAIN.

Convulsions cannot aid in establishing the existence of the so-called psycho-motor centres—Value of clinical facts—Cases of disease of the pons Varolii in its centre or in its two sides producing hemiplegia—Value of such facts against the admitted theory of production of paralysis.

RECENTLY the existence of certain so-called "psycho-motor centres" has been grounded on the experimental researches of Fritsch and Hitzig, and on the clinical facts showing that unilateral convulsions will appear sometimes in the limbs on the opposite side to that on which a lesion exists in the convolutions of the brain. This second kind of proof was first produced by Dr. J. Hughlings Jackson, who has the merit of having done this before the experiments of the two German physiologists just named had been made. I will by and by, when treating especially of paralysis as caused by the convolutions of the brain, show how erroneous the conclusions are that have been drawn from these two series of facts. I will merely say now that clinical observation teaches that convulsions may appear as well on the side of the lesion in the brain as on the other side, and that if they are more frequent on this last side when the cause is a tumour or an inflammation, they, on the contrary, are more often witnessed on the side of a hæmorrhage in certain parts, and perhaps in most parts, of the brain.*

I have purposely delayed speaking of the argument that the universally admitted theory that paralysis in cases of organic disease of the brain is caused by the loss of function of the part or parts destroyed or altered, must be accepted, because we so frequently find disease in some part of the motor tract associated with a cessation of voluntary movement. It is against this argument that I will especially accumulate facts; but before giving those facts it is essential to state that objections, and sometimes very legitimate ones, may be raised against a great many of the cases we make use of in our discussions to establish or to disprove views on the properties and functions of different parts of the brain. I am perfectly aware that there are *incomplete* facts, *badly-observed* facts, *doubtful* facts, and also *deceitful* facts. However, after having said that I am perfectly aware that I may be deceived, I will state that I have generally endeavoured to diminish rather than increase the value of the cases favourable to the views I hold. But I may say that if I find that disease exists in the motor tract, and that paralysis is connected with it, I cannot look upon such a fact as having a decided meaning. At best it is, or it may be, in harmony with the generally received notions, but it is not a proof of their correctness. However great the number of such facts, their value does not essentially change; they do not and cannot acquire the character of proofs simply because of their being often observed. If, on the contrary, we have a case—even a single one—of undoubtedly complete destruction of a part of the brain supposed to be endowed with a special function or a special property, and if we find that there is no loss of that function after such a destruction of a whole part, or no manifestation of that property during the progress of that destruction, then we can say that we have a decisive fact, a *proof* and an absolutely certain one, that the part is not endowed with the function or property attributed to it. This proof does not, however, go far enough to show that that part or organ has no share whatever in the function or the property said to belong to it, but it is decisive, I repeat, in showing that the destroyed organ is not endowed, exclusively and specially, with the supposed function or property. In relating facts and chiefly clinical cases I will say about each one what value I attribute to it.

Another preliminary remark must be made before I proceed to the demonstrations I have to give. It is that if I deny absolutely the existence of centres of action (whether for movement, perception of sensations, thought, speech, &c.), formed of clusters of nerve-cells, and existing, each of them, in a small area of the brain, such as would be, for instance, the localisation of the will-power for the muscles of the arm in the upper part of the ascending frontal convolution, I am far from denying that there is for the diagnosis of the seat of disease in the brain a great importance in knowing that very frequently certain symptoms will appear in connexion with disease in a certain place. I have, on the contrary, always recognised that paralysis is by far more frequent when disease is in certain parts of the brain than when it is in some other parts. But it will appear just as frequently from disease in certain parts which are not considered as belonging to the voluntary motor tract, such as the optic thalami, as it will from disease in supposed parts of that tract, such as the corpora striata or the pons Varolii.

I now come to the examination of many series of cases of paralysis from brain disease, and will show that, in each of those series, the facts cannot be explained by the views that are generally admitted, and that, on the contrary, they are very easily explained by the new views that I try to substitute for the old ones. I will show especially that there are thousands of facts which do not agree with the view that paralysis depends on the loss of function of the part diseased in the brain, while they agree perfectly with the view that it results from the loss of function of nerve-cells at a distance from the seat of the disease.

Having already, as I believe, fully established in another lecture* that paralysis may appear on the side of a lesion in the brain, whatever is the seat, kind, and extent of the disease or injury, I will only now state that facts of that kind are absolutely in opposition to the received view about the origin of paralysis in brain disease, and that, on the contrary, these facts are in perfect harmony with the view that paralysis, like other effects of an irritation, can appear in any part of the body, whether its primitive cause be in one or the other half of the brain. The same conclusion comes out forcibly from the various series of facts I will now mention.

1. *Hemiplegia may appear although there is disease in the two halves of the brain.* No doubt that if we find hemiplegia in such cases existing on the side opposite to that where disease is most extensive in the brain, this would seem all right according to the old views; but, as I will show, there are a great many cases of disease equally destructive in the two halves of the brain with paralysis on only one side, and there are also many cases in which paralysis has appeared on the very side of the greatest lesion of the brain. I will mention a number of these two kinds of cases.

CASE 2.—A patient attacked with *paralysis only of the right limbs*, had a tubercle, of the size of a walnut, in the base of the brain. It was placed exactly on the middle line, equally pushing sideways the two lateral halves of the pons Varolii and the crura cerebri. (Huguier, *Bulletin de la Société Anatomique*, vol. iv., 1829, p. 52.)

Here, then, we have a case, recorded by a well-known, careful observer, in which, although there was disease altering conductors, in the two sides, in an important part of the pretended motor tract, paralysis appeared in the limbs of only one side. Evidently this is a decisive fact against the old views, as according to them, there should

* In a lecture "On Localisation of Function in the Brain" I have already shown that there are many cases of hæmorrhage in the brain which are not in harmony with the views that the convolutions contain excitable motor centres, and that these pretended centres are in the anterior and middle lobes of the brain. Out of 222 cases of hæmorrhage collected by Gintrac (putting aside the cerebral ganglia, the ventricles, and the central parts), there were 47 cases of convulsions either in one side or the two sides of the body. Of these 47 cases there were 11 in 45 cases of hæmorrhage in the convolutions, 2 only in 17 cases in which blood was effused in the anterior lobes, 25 in 127 cases in which it was in the middle lobes, and 9 in 33 cases in which it was in the posterior lobes. So that, contrary to what is supposed, the posterior lobe is the part in which a hæmorrhage has the greatest chance of producing convulsions.

* THE LANCET, January, 1876.

have existed the same paralysis in the two sides of the body.

The pons Varolii in many other cases in which it was diseased in its central parts has given rise to that form of paralysis known now under the name of altern or alternate paralysis. I will only call attention to some remarkable cases of Dr. Hillairet (*Comptes Rendus de la Soc. de Biologie*, 1860, p. 116), of Dr. Barlow and of Dr. J. W. Ogle (*Transactions of the Pathological Society of London*, vol. iv., 1853, p. 28, and vol. xii., 1861, p. 4), and Dr. Martineau (*Bull. Soc. Anat.*, vol. xxxv., 1860, p. 311).

I know full well that in these cases, as shown by the facial paralysis existing in one side only while the limbs were paralysed on the opposite side, it may be considered as clear that the disease extended more on one side than on the other, as it will be supposed that the roots of the facial nerve were reached by the lesion on one side; but, although it may have been so, there is no proof of it, as I will show by and by that an altern paralysis may be caused by disease in other parts than the pons Varolii. But even admitting that the disease was greater in extent in one half of the pons than in the other, the fact remains that for only a very slight difference—as there could not have been more—between the two halves of the pons Varolii, there was one half giving rise to a paralysis, while the other did not—a dissimilarity of effects which is in complete disagreement with the admitted views about the production of paralysis, while it is in perfect harmony with the views I hold.

Lectures
ON
QUESTIONS IN OPHTHALMIC SURGERY.

Delivered at the Royal College of Surgeons,

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LECTURE II.—PART II.

ON GLAUCOMA.

THE state of simple glaucoma, then, is essentially one of atrophy, differing from what may be called idiopathic or central atrophy in being due to pressure, and therefore in being attended by evidences of pressure which may be detected if they are carefully looked for. It also differs from idiopathic atrophy in requiring a totally different treatment; for, while the latter can be controlled, if at all, only by means which exert their influence upon the nervous centres, the former can be controlled only by the removal of the hurtful pressure in which it has its origin. The diagnosis must rest mainly upon the hardness of the eyeball, upon the fulness of the external and of the retinal veins, and upon the actual or readily induced pulsation in the latter; and in any case which admitted of *bonâ fide* doubt, it would be proper to give the patient the benefit of that doubt by the performance of iridectomy, which, while it would be certainly harmless as against central atrophy, would probably be curative as against glaucoma. Iridectomy is required in so many other states besides glaucoma that I purpose to devote a lecture to the consideration of the *rationale* of its various uses, and to defer until then much of what I have to say upon the principles which should regulate the treatment of tension generally. Still it would be improper in this place to omit the statement that iridectomy is the single remedial measure in which, in all the forms of glaucoma, we may repose a certain degree of confidence. Glaucomatous conditions may be beyond the reach of treatment altogether; but, so long as they are curable, it is only by iridectomy, or by some kindred proceeding, that they can be cured.

In a very large proportion of cases, glaucoma deviates from the simple type already described: first, in being more acute—that is to say, in occupying a shorter period of time for its complete development; and, secondly, in being attended by pain and by active or inflammatory congestion. I have been accustomed to assume that the severity of the symptoms depends mainly upon the rate of progress; and that, while a slowly increasing tension gives the ocular tunics time to accommodate themselves to the new conditions in which they are placed, a rapid increase leads to inflammatory reaction. I think there can at least be no doubt that this view affords an adequate explanation of the presence or absence of pain; and that the degree of severity of pain bears a general relation to the rate at which tension increases. It is highly probable, moreover, that pain and inflammation, when once excited, may themselves, as sources of nervous irritation, serve to intensify the conditions in which they had their origin.

For convenience of description, it is usual to recognise, besides the simple or chronic glaucoma, three other types of the disease—the subacute, the acute, and the fulminating; and also to recognise, in each case, four stages—the impending or threatening stage, the prodromal, the actual, and the completed. There is in all this a certain affectation of precision which does not seem to me to be entirely in accordance with clinical facts, or with their unpleasant habit of setting classifications and divisions at defiance. When glaucoma is not of the kind which I have endeavoured to describe under the term chronic, it departs from this type in two directions: first, by being less regular in its course; next, by being more rapid. The tension increases, not gradually and as it were imperceptibly, but by a series of sudden increments, each of them sufficiently marked to produce a decided impression upon the visual function. This impression may be so slight as to be compared by the patient to a fog or mist; or it may amount to extinction of sight as if by a single blow. In ordinary cases, by some kind of compensation, possibly by the ocular tunics becoming accustomed to pressure against which they had at first rebelled, possibly by some reabsorption of effused fluid, or by some recovery of the deranged circulation, the obscuration of sight is only temporary; the cloud passes away, and the sight is said to be better. At the same time, any pain which may have accompanied the attack—and this pain is sometimes severe—either subsides or wholly disappears. The eyeball, in some rare cases, may even return to normal tension and to normal functional activity. But in the greater number of instances it is left preternaturally hard, with some diminution of its former acuteness of vision, and with some contraction of the field, so that it cannot include more than a very limited area without altering the direction of the gaze. At the same time, the patient often complains of iridescent rings around luminous objects; the pupil is generally a little dilated and sluggish; and the iris often appears to be pushed forwards towards the cornea. Under such circumstances, the ophthalmoscope often shows a characteristic effect of the internal pressure. Not only will there be pulsation, actual or readily induced, of the retinal vessels; but the optic disc itself is pushed backwards out of the eye, so that its naturally somewhat prominent surface is converted into an actual cup or depression. This cup is rendered conspicuous by the way in which the vessels bend around its margin. Produced more rapidly than the corresponding depression of chronic glaucoma, it differs from the latter in being more steep-sided and abrupt; and it is readily distinguished from the condition known as physiological excavation, by the character that it extends fully up to the extreme margin of the nerve entrance, while the physiological excavation is surrounded by a ring of nerve-tissue which still occupies its proper level. The glaucomatous depression must always be regarded as affording certain evidence that the tunics of the eye have already been subjected to a very serious degree of compression and disturbance.

I have already mentioned, Mr. President, that a single glaucomatous outbreak may extinguish sight; and I need hardly say that a degree of pressure which is sufficient for this purpose must also be productive of acute pain by distension of the ocular tunics. Such cases were called by von Graefe "fulminating." They are fortunately very rare, for the time during which treatment can be usefully applied to them is so short that they are comparatively seldom brought within its reach. When seen, they should be quite unmistakable. The symptoms are intense or agonising pain, with stony hardness of the eyeball and with rapid extinction

of sight. The pupil will generally be dilated and fixed, and the eye intensely congested; while the cornea soon becomes cloudy, and the media become turbid or opaque. As long as perception of light is preserved, an iridectomy may save vision; and, even when perception of light is lost, the operation may still be required for the relief of pain.

But the cases of glaucoma which have most interest for the profession generally are neither those of the fulminating variety, which are extremely rare, and in which sight is often lost before any medical aid can be procured, nor those of the simple chronic form, in which there is ample time for consultation and deliberation about the course which should be pursued. Between these two extremities of the scale we find a much larger number of examples of the subacute and acute forms of the disease, and it is with regard to these forms that serious errors of diagnosis or of treatment are most liable to be committed.

In subacute or acute glaucoma, after an uncertain duration of symptoms indicative of slight pressure, and more or less resembling those of the chronic form, the tension begins to increase irregularly, by successive sudden increments, each of them sufficient to produce more or less obscuration of vision, more or less appearance of inflammatory reaction, and more or less pain. After every such attack, or at least after the earlier ones, there is usually a more or less marked remission of symptoms and clearing of the sight; and perhaps nothing tends more directly to the neglect of proper remedial measures than this frequently recurring betterness which is not real improvement. When a careful examination is made, it becomes manifest that each attack leaves the sight somewhat worse than it was before; and, after each attack, the physical signs of the glaucomatous condition become more declared. The superficial and the retinal veins become more distended, the eyeball becomes continually harder, the pupil dilated and fixed, the disc more deeply excavated, the field of vision smaller, and central vision more dim. When the distension reaches a certain point, either suddenly or gradually, the cornea becomes steamy from disturbance of the nutrition of its surface epithelium, or sometimes of its intimate structure; and it will then no longer be possible to examine the interior of the eye with the ophthalmoscope. It is customary to distinguish the acute cases from the subacute by saying that in the former the symptoms present no absolute remissions, while in the latter the first two or three outbreaks may be followed by apparently complete recovery; but all such distinctions are little more than endeavours to draw artificial lines where no lines exist in nature; and the epithet subacute, as applied to glaucoma, is not unlikely to be mischievous, by leading to the supposition that in the case to which it is applied there is plenty of time to spare. The very acute, and even the fulminating forms of glaucoma, are usually preceded by stages of slower progress, although these may be of such a kind as to escape superficial observation; and the most chronic form of the affection is always liable to be converted into the most rapid. The only safety for the sight is in the recognition of even chronic glaucoma as a malady in which effectual treatment is required without delay.

Notwithstanding this requirement, the experience of special ophthalmic hospitals, and of the ophthalmic departments of general hospitals, and, I may fairly add, of ophthalmic surgeons generally, is such as to leave no doubt that the character and urgency of the glaucomatous states are not always fully realised by practitioners. To whatever extent this may be true, the evil is probably in great measure due to the prevalence of specialism; for the conditions referred to are simple in their nature, and are easy of recognition when once attention has been called to them. Perhaps, however, one great stumbling-block in the way of the diffusion of sound views about these conditions has been the time-honoured belief that they are essentially gouty in their character; for this belief has naturally led to the hope that a gouty condition would be relieved by the use of alkalies and of colchicum. Within the last few months I have seen two patients who have both been condemned to hopeless blindness because they were both, by different practitioners in different parts of England, recommended to abstain from seeking special advice about the daily increasing dimness of their sight until the supposed gouty pains in their eyes had first been alleviated by general treatment. Sometimes the pain of glaucoma is attributed to rheumatism, sometimes to neuralgia, and the almost self-evident proposition that it is the direct effect of tension—that is, of distension—of the ocular tunics, is comparatively seldom realised. If the notion that the eyeball was painfully distended was once fairly admitted into the mind, with the corresponding notion that the distension was at the same time producing obstruction, more or less complete according to its degree, of both the arterial and the venous circulation, I think no one could expect either to relieve the pain, or to diminish the distension, or to improve the sight, by any or all of the drugs in the Pharmacopœia. When, therefore, I see, as I see very often, cases of glaucoma which have been suffered to proceed unchecked for weeks or months, and sometimes until they have lapsed into a hopeless condition, in vain reliance upon some form of so-called general treatment, I feel that specialism, if it is indeed responsible for the want of knowledge to which such results must be attributed, owes, by way of compensation for the mischief it causes, a very deep debt both to the public and to the profession. There is no other part of the body in which an analogous physical change would be left to work out its effects unhindered, whilst time was being wasted by the administration of useless medicines.

Upon the question whether glaucoma is indeed a gouty affection—that is to say, whether it is, either directly or indirectly, an effect of the gouty diathesis or of the habits of life to which gout is often traceable,—I think we have hardly sufficient evidence for a positive decision. When acute glaucoma was described as arthritic posterior internal ophthalmia, complicating a chromatic change of unknown character, the glaucoma was itself accepted as a proof of its own gouty origin, and there was no more to be said on the subject. It was supposed to be as characteristic as a swollen great toe. I think we are perhaps entitled to say that gout, if it is a factor in the production of glaucoma at all, is at most only one of many possible causes of the original increase of tension, and that it may also have some influence upon the rate of further or progressive increase. A certain proportion of glaucomatous patients, although I think not a very large proportion, are persons of gouty constitution; but I have never once seen an outbreak of acute glaucoma attended by any of the general symptoms of an outbreak of acute gout; neither have I ever seen glaucoma relieved by the occurrence of gout in a regular form. It seems not unlikely, however, that the gouty habit of body may be favourable to the occurrence of increased intraocular tension; and this probability is worth remembering, so long as it does not induce us to follow some ignus fatuus as our guide to treatment. Prior to von Graefe's discovery of the oftentimes curative effect of iridectomy, and under the full therapeutic influence of the gouty hypothesis, the issue of glaucoma was always in blindness—blindness inevitable, hopeless, and complete; and the cases differed from one another only in their respective degrees of acuteness—that is to say, in the severity of each successive attack, in the degree of vision between the attacks, in the length and completeness of the remissions, and in the time which elapsed before the final result was accomplished. To a skilled observer, in those days, the commencement of the glaucomatous process meant the eventual loss of sight; and the only question for discussion was how long a time would be likely to elapse before the process was completed.

To a practised ophthalmic surgeon the aspect of glaucoma is so characteristic that I can hardly conceive the possibility of the nature of the disease being overlooked. Even in the early stages there is something in the very tint of the congestion which at once declares the nature of the case, and which leads the feeling fingers, almost instinctively, to the surface of the upper lid. But the surgeon who is not practised in ophthalmic matters too often sees only an inflamed and painful eye. The cornea is perhaps a little steamy, and the aqueous humour turbid, but the pupil, if sluggish, is dilated, and he does not think there is iritis; so he gives a purgative, perhaps followed by an anodyne, applies two or three leeches near the margin of the orbit, and prescribes sedative lotions and rest. Unless the case was originally of the hyperacute form, a remission soon takes place, the pain decreases, and the sight improves.

It probably is not discovered, in such a case, that the eyeball is left somewhat harder than natural; and it is not thought important that the sight has not quite returned to the normal standard. After a time, longer

or shorter in different cases, there is a second attack, possibly not so severe as the first, which, like the first, undergoes partial subsidence, and everybody is pleased. So the history repeats itself, until either the sight is at once extinguished by an attack more violent than its precursors, or until the patient suddenly discovers that all the successive gettings better of his eye have at last left him blind, or nearly so. He then comes to an ophthalmic specialist, who, supposing him to be at once conscientious in the discharge of his duty to his patient, and solicitous for the reputation of a professional brother, has by no means an easy task. When one eye has been destroyed by glaucoma, the other is likely either to be already suffering from an early stage of the same affection or, at least, so to suffer before long. The ophthalmic surgeon has commonly to make the patient understand that the condition of the first eye is hopeless, although it may require an operation, or even removal, for the relief of pain. He has also to make him understand that the second eye will probably be attacked in the same way; and that then a timely operation will almost certainly arrest the disease and preserve the sight. It is very difficult for a patient to realise this from verbal description, and still more difficult for him to realise it afterwards from experience, without his realising at the same time that all the pain of his former attacks, and the loss of sight which followed them, would have been spared to him if his original medical attendant had been acquainted with the nature of the condition, and had been master of the resources of his calling. The feeling of diminished confidence which can hardly fail to be thus engendered may easily extend itself to other matters, concerning which it may be wholly without foundation; and it may thus seriously affect the reputation of an otherwise skilful and careful surgeon. An excuse which I have heard made under such circumstances, "I am not an oculist," does not come with good grace from anyone who at first accepted the responsibility which he afterwards endeavours to disclaim.

The recommendation which I should like to found upon the histories of such cases is chiefly this: that every practitioner should regard the state of tension of the eyeball as something never to be forgotten or left unnoticed; and should remember that, given high tension, any great amount of improvement is a physical impossibility. It matters nothing whether the original cause of the disease was gout, or rheumatism, or neuralgia, or exposure to cold, or any of the other incidents of life to which glaucoma, like other maladies, is commonly attributed. Whatever the remote cause, the actually maintaining cause is the high tension; and as long as this high tension remains unrelieved all other treatment will only be of the smallest efficacy. In every case of apparently inflammatory eye disease, therefore, the precise morbid conditions present are of secondary importance when compared with the state of tension; and the first question of the practitioner should be: Is there here such a degree of tension as to constitute an obstacle to recovery? The palpation of the eyeball, with reference to this question, should never be neglected; and the sound eye should in most cases be compared in this respect with that which is diseased. If these precautions were generally adopted, we should soon see no more of the embarrassing and distressing cases to which I have referred, and in which vision has been thrown away, by a vain and groundless reliance upon measures which were wholly inadequate to meet the emergency against which they were directed.

Besides the primary forms of glaucoma, there are many examples of what have been called the secondary forms of the same affection, those in which increased tension appears to have been brought about by the irritation excited by other morbid changes. There are, of course, conditions not strictly glaucomatous, in which there is a direct increase of tension; as, for instance, in serous iritis, when there is a direct and obvious hyper-secretion; and again in intraocular cancer, in which the mere presence of the growth necessarily distends the eyeball. Serous iritis presents another point of resemblance to acute glaucoma, in that these two are the only apparently inflammatory affections of the internal eye in which the pupil is often somewhat dilated. The differential diagnosis is not difficult. In intraocular cancer the nature of the case would usually be quite evident before any symptoms resembling those of glaucoma were produced; and the growth is generally plainly visible. In serous iritis, the increase of fluid takes place chiefly into the anterior chamber, so that this chamber becomes distended, and the iris and lens are thrust back. In glaucoma an opposite condition exists. The increase of fluid occurs chiefly in the vitreous chamber, and hence the lens and iris are pushed forwards, so that the cavity of the anterior chamber is often nearly obliterated, the iris almost seeming to be in contact with the cornea.

There is perhaps hardly a single inflammatory affection of the eye in which an increase of intraocular tension does not sometimes occur, adding some of the symptoms of glaucoma, such as hardening of the eyeball, contraction of the field of vision, and arrest of the circulation, to those of the pre-existing malady; but such complications, very common in some affections, are comparatively rare in others. The condition most prone to produce secondary glaucoma is the presence of a large corneal cicatrix after ulceration, especially the cicatrix left by a perforating ulcer, and to which a portion of the iris is adherent. Some forms of inflammation of the cornea entail a liability to increased tension; but in all these states the patients are usually young, and their ocular tunics are more extensible than they become at a later period of life, so that impairment of vision is neither so soon nor so certainly produced. Nevertheless, if tension steadily increases, the secondary glaucoma either is, or soon becomes, of greater importance than the primary malady, and should receive the first attention of the surgeon. I have met with a few instances of primary glaucoma in early life; but in these the increasing tension has been masked by yielding of the sclerotic and elongation of the eyeball; so that the cases assumed the aspect of progressive myopia, and were only recognised by the rate of increase, and by the excavation of the optic disc which attended it.

I have already mentioned, Mr. President, that the treatment of glaucoma, from the dawn of medical history to our own time, had been utterly without effect, or that, on the most favourable supposition, it had done no more than to retard the inevitable end. Mackenzie, in 1830, recognising the importance of the distension of the ocular tunics, had suggested and practised perforation of the sclerotic; and Middlemore, five years later, followed in the same path. That their recommendations fell into oblivion is perhaps the best proof that their practice was not fruitful of results; but yet, within the last few years, it has been seriously recommended that paracentesis should be employed as an ordinary substitute for iridectomy. Soon after 1850, von Graefe, who was then only twenty-three or twenty-four years old, turned his attention to glaucoma as to a malady which was the reproach of ophthalmic surgery, and commenced a series of experiments with a view to its relief. The excavation of the optic disc, then lately rendered visible by the ophthalmoscope, had given fresh significance to the heightened tension; and the discovery of a means of diminishing tension was what von Graefe proposed to himself as the goal of his researches. He made trial of many evacuant medicines, purgatives, diuretics, diaphoretics, but all without avail. The common mydriatics, atropine, daturin, and the like, appear to diminish the tension of healthy eyes; and these were also tried without effect; von Graefe observing that their inefficacy might possibly be due to the difficulties which the hardness of the eye would place in the way of their being absorbed. The disused treatment by paracentesis was revived, and was found at the best to be productive of no more than a temporary amelioration. At last the clue was given by the observation that eyes from which a portion of iris had been excised, in order to make an artificial pupil, or for any other reason, were often permanently softened. This observation led to experiments upon animals, and it was found that the excision of a broad piece of iris from a previously healthy eye invariably produced a state of subnormal tension. The change thus wrought was not tested by palpation alone, but also by introducing the needle of a hypodermic syringe into the anterior chamber, and by observing the height to which the aqueous humour would ascend in the barrel before the iridectomy, and again after the eye had recovered from it. The results thus obtained were sufficient to justify trials of the operation as a remedial measure upon the human subject, and in 1856 von Graefe performed his first iridectomy for the cure of glaucoma, and at once removed from the disease the burden of utter hopelessness under which it had previously lain. In 1857 his results were published to the world, and were at first met by various degrees of acceptance or of incredulity.

In this country Mr. Bowman earned the gratitude alike of the profession and the public by the zeal and earnestness with which he first tested the accuracy of von Graefe's statements, and then spread abroad the glad tidings of the discovery. Nineteen years have elapsed, experience has been gained, and controversies which once raged are now wellnigh forgotten. I have not even a conjectural estimate of the number of people who have been rescued from impending blindness by iridectomy, but it is quite certain that this number must be such as to constitute von Graefe one of the greatest benefactors to the human race that the world has ever produced.

The *modus operandi* of iridectomy, Mr. President, is too large a subject to be entered upon at the close of a discourse, and as the operation has many other uses than in glaucoma, I propose to consider it in detail on the next occasion. At present I must confine myself to its bearing upon the prognosis of the malady which is now under consideration.

Regarded from this point of view, and putting aside a few exceptional examples, whether acute or chronic, which are still found to resist treatment, we may say, as a general rule, that in the most acute cases the operation, if performed before perception of light is lost, will nearly always restore vision to the normal standard, and will prevent a recurrence of the affection. In subacute cases it will arrest the disease, but the restoration of sight will generally be only gradual, and will often ultimately be incomplete. In chronic cases the operation will usually arrest the malady, but is comparatively seldom followed by improvement; so that it cannot be relied upon to do more than preserve the amount of vision which existed when it was performed. In these chronic cases, moreover, we sometimes find that the atrophic changes which the pressure had initiated refuse to be arrested, and that blindness, after all, closes the scene. It must not be forgotten that such conditions ought not now to be suffered to exist; and that the chronic forms of glaucoma should be detected, and submitted to operation, before the atrophy has received a sufficient impulse to be continued after its exciting cause has passed away. The reliance which we justly place upon iridectomy should not on that account make us neglectful of other remedies; for treatment which by itself would be unavailing may become extremely useful as an auxiliary, when once the predominating physical condition of extreme tension has been set aside. The state of the general health, the presence of the gouty or of any other diathesis, the state of the digestion, of the sleep, and of the secretions, are all matters which should be carefully inquired into and regulated. In the great majority of instances, iridectomy alone will cure glaucoma; but there are yet some in which it fails to relieve the tension, and there are others in which the tension will recur. It is quite possible that, in both these classes, the resources of the physician might turn the scale in favour of the patient.

Besides iridectomy, there are certain alternative operations which have been proposed; but I think it will be most desirable to defer any description of these, or any examination of their respective merits, until, in my next lecture, I have described iridectomy itself, and have endeavoured to find some explanation of its remedial action.

ON THE USE OF THE

HYPOPHOSPHITES OF LIME AND SODA IN PHTHISIS.

BY M. CHARTERIS, M.D.,

PHYSICIAN TO AND LECTURER ON CLINICAL MEDICINE IN THE GLASGOW ROYAL INFIRMARY.

(*Concluded from vol. i., p. 705.*)

REFERRING more especially to hospital cases, I find that since the month of May last thirty cases of phthisis have been admitted into my wards. Excluding five cases at present under treatment, and referring simply to the thirty cases in which definite results have been obtained, it has been noted that thirteen left the hospital improved, twelve not improved, and five died.

The following cases may be given as briefly illustrating what is meant by the terms used.

T. T——, aged thirty-seven, a brush-maker, was admitted on May 13th, 1875. He complained principally of a dry, hacking cough, which was pretty constant. This had lasted for a month, appearing after convalescence from typhus fever. The sputum was small in quantity, brought up with difficulty, and consisted of thin mucus, and three days before admission he had coughed up a small quantity of blood. He was subject to heavy night-sweats, had a bad appetite, and was much emaciated. Temperature 100°. On examining the chest, a slightly flattened condition of the left side was observed; indistinct mucous crepitation over left apex, where there was also slight dulness. The patient took three grains of hypophosphite of lime thrice daily. During the next four days there was not much change, but on the sixth day the sweating had entirely disappeared, and ceased permanently from this date. The cough and weakness, however, still continued, and it was found that in this and other cases the ipecacuanha wine spray promoted expectoration and relieved the cough. Improvement continued steadily and gradually, the appetite increased, and the general condition may be best described as "bright and cheery."

After six weeks' residence in the hospital he was sent to the convalescent home. At the end of August he was seen following the occupation of a musician on board a Clyde steamer, and although much exposed, he did not seem to have fallen off in any way, stating "that he never felt better in his life."

M. C——, aged eighteen, a mill girl, was admitted on June 17th, 1875. She was a very strumous subject, and had caries of the metatarsal bones of the left foot, and a scrofulous swelling of the neck. The patient had always been delicate, and the family history was not good. Latterly her cough had greatly increased. She was much emaciated, and subject to nightly perspirations. Distinct evidence of phthisis was found at both apices, back and front. The sputum was profuse, frothy, and muco-purulent. She was ordered three grains of the hypophosphite of lime thrice daily, and by the 24th the sweating had gone, and she looked more hopeful and in better spirits. The temperature since her admission had averaged 100·2° in the evening.

This somewhat improved condition was not permanent, for on July 4th she suddenly became sick, and vomited. Diarrhœa set in, the sweating returned, and the temperature ran up to 102·4°. The dose of the hypophosphite was increased, but no improvement was manifested, and on July 8th she was permitted to go home at the urgent request of her friends.

This may be considered a somewhat typical and common instance of a phthisical patient dismissed "Not improved." It was generally found in these cases that, although the sweating was always stopped by the hypophosphite, the general health did not improve, neither did the chest symptoms, and it was deemed advisable to permit the patient to leave.

The following case was treated from first to last by the hypophosphites:—

E. W——, aged twenty-eight, was admitted Nov. 10th, 1875, suffering from cough, pain in left side, loss of appetite, and general weakness. Patient states that she enjoyed good health till five months ago, when her present illness began with slight hæmoptysis. The cough set in immediately afterwards, accompanied by an expectoration of a frothy and slightly black character. On examining the chest there was distinct flattening of the infraclavicular regions of both sides. On the left side there was dulness on percussion, with all the other evidences of a large cavity. Small crepitations were also heard all over the chest on both sides. The temperature was 100° in the morning, and 100·5° in the evening.

Some improvement was manifested from the 14th till the 27th of November, as the temperature ranged from 98° in the morning to 99° in the evening. The night-sweats also ceased.

From Dec. 1st till the day of her death on Feb. 29th the temperature steadily rose, and latterly ranged from 100·5° in the morning to 102° in the evening. The night-sweats also returned, and the hypophosphites in no way checked them. The physical signs also indicated rapid disorganisation of the right lung.

Autopsy.—Body much emaciated; slight œdema of feet. n opening the thorax, the right lung was bound to the

wall of the chest both anteriorly and posteriorly by recent adhesions. On cutting into the lung itself, it appeared riddled with small abscesses, with two large cavities in the upper lobe; weight 33 oz. Over the lower lobe of the left lung there was a cicatrix about three inches in length, and, on cutting into the lung at this part, a large cavity was seen filled with pus, as well as several cavities at other parts; weight 22 oz. The liver was fatty, and weighed 45 oz. Spleen and kidneys normal.

These cases are faithful examples of the use of the hypophosphites in phthisis, either in the form of lime or soda. That the medicine is not inert its power of checking night-sweats evidences, and also its influence in giving tone to the system, if by this is meant increase of appetite and general cheerfulness. Without expressing a definite view on the subject, I have been somewhat forced to the conclusion that if the hypophosphites did no good, they certainly did harm, and in some measure hastened a final issue by increased fever, as indicated by a higher temperature. While acknowledging the benefit derived from their use, as testified to by patients themselves and by competent witnesses, I am of opinion that they should by no means be used indiscriminately, and that when given their effect should be carefully watched by daily thermometric observation.

In further alluding to the difference of temperature in the sides affected in phthisis, the following results have been noted:—In one extreme case, following an attack of pleurisy of the left lung, and where the right was unaffected, the average increase of the evening temperature for a month was ·96°, or very nearly a degree. In another, where the right lung appeared alone affected at the apex, the result of ten observations showed a difference of ·38° in the morning and ·40° in the evening. In another case, at present in the hospital, and where there are absolutely no other physical signs of phthisis except weakness and emaciation, the following facts have been recorded as the result of temperatures taken morning and evening, and extending over a period of ten days:—Evening: left side, average 101·86°; right side, 101·56°. Morning: left side, 100·36°; right side, 99·96°. Health certainly gives no variation like this, and no other disease simulates phthisis so much as enteric fever. A case of enteric fever was admitted into my wards on the same day as the one last mentioned, and the temperature was taken carefully on both sides, with the result of finding no appreciable difference, the average being on both sides 99·4° in the morning and 101·2° in the evening, and, as convalescence was reached, 98·2° in the morning and 99·6° in the evening.

Blythswood-square, Glasgow.

IMPACTION OF A SMALL WHISTLE IN THE RIGHT BRONCHUS; RECOVERY.

BY SOLOMON CHARLES SMITH,
SURGEON TO THE HALIFAX INFIRMARY.

ON January 14th, 1876, I was asked to see a boy, eight years old, the history of whose illness was somewhat curious. Six days before, while out walking, he swallowed a whistle which he had in his mouth. He stated that the whistle was as thick as a penholder, and about half an inch long; that it would whistle only when air went one way through it, and that at the time he swallowed it it was so placed between his lips that he had to suck air in to make it sound. For two hours after the accident it whistled loudly every time he breathed. When he arrived at home the whistling was still going on. The boy was frightened, but did not appear to have any pain or to be short of breath. An emetic was administered, but before it acted the whistling ceased. A purgative was then given, which acted, but did not bring away the whistle; it was, however, thought that it had probably been lost when he vomited, and, as he appeared not to suffer any inconvenience, no further attention was given to the case. The whistling had now, however, after nearly a week's interval, returned, and I was sent for.

Although there had been no symptoms which the parents had associated with the accident, I found that, during the later part of the week, he had had frequent attacks of violent croupy cough with some expectoration—a thing he had not had before. When I arrived there was no pain or feeling of distress; nothing was to be seen or felt in the pharynx; there was no dulness on percussing the chest. The right side of the chest did not expand as freely as the left; there was almost complete absence of respiratory murmur and voice sound over the lower six inches of the right lung, the respiratory sounds being good in the upper lobe of the same lung, and markedly puerile in the whole of the left lung. The diagnosis was impaction of the whistle in that division of the right bronchus which leads to the lower half of the lung. The treatment recommended was inversion of the body, with the view of dislodging the whistle. I did not, however, think it right to adopt this course without having everything at hand for immediate tracheotomy, should it be necessary. Nothing was done, therefore, until Jan. 16th, when my father and Mr. Teale, of Leeds, met me in consultation. The physical signs remained unchanged, and by laryngoscopic examination the larynx and trachea were seen to be free from any foreign body.

Seeing, then, that only a portion of the right lung was deprived of air, and that the obstruction was therefore in all probability at or beyond the first division of the bronchus, and consequently out of reach by any fishing apparatus, and considering the absence of all urgent symptoms of distress, we decided to make a fair endeavour to dislodge the whistle (having the table spread ready for immediate tracheotomy if it should be required), and then, if unsuccessful, to leave it alone, unless fresh symptoms should occur. We made a very complete attempt to dislodge the obstruction, but without effect; we therefore enjoined rest and quietness.

On Jan. 20th I was present while the whistling was going on. It did not occur when he was breathing quite quietly, but he could bring it on by a cough or a deep respiration. The sound was only produced during expiration, was hardly heard at all through the stethoscope applied to the chest walls, was very loud, and gave one the impression that it was generated within the mouth.

On Jan. 31st, and for a week afterwards, he complained of a nasty taste in the mouth after coughing.

The accident happened on Jan. 8th, and from that date till May 7th he was occasionally troubled by the whistling, which sometimes occurred many times in the day, and sometimes was many days absent. All the time, however, he had more or less cough, and during the last six weeks he got decidedly thinner, although he took cod-liver oil. For two or three days before May 7th he had a good deal of expectoration, and that morning, after vomiting a quantity of mucus, the cough became almost continuous, till at last, during a violent coughing-fit, the whistle was ejected.

When I saw him again at the end of a week his condition was much improved, his appetite was better, and he was gaining flesh, but there was still some diminution of the respiratory sounds at the base of the right lung.

Remarks.—The very slight amount of discomfort produced by so serious an accident is a point worth noting. It is very questionable whether attention would have been at all drawn to it, but for the singular fact that the impacted substance was a whistle, and was therefore capable, by the sound it produced, of demonstrating its own presence in the lung.

Halifax.

EPIDEMIC AMONG CATS IN DELHI, RESEMBLING CHOLERA.

BY SURGEON-MAJOR J. FAIRWEATHER, M.D.,
CIVIL SURGEON, DELHI.

(*Concluded from page* 117.)

NOTWITHSTANDING that the last-mentioned experiments failed to confirm the earlier ones, I see no reason to reject the latter as fallacious; for even if we knew much more than we do about the times and the seasons and the peculiar conditions under which the poison of cholera takes effect, it is not likely we should ever be able to obtain results with anything like the certainty of a chemical experiment. And here I may mention that in the second experiment, where the cholera discharges proved successful

(although, it may be remembered, they failed at first), the success may perhaps have been due to a heavy fall of rain which occurred at the time, during which the cats were necessarily exposed to cold and damp.

At the request of the Sanitary Commissioner with the Government of India, I preserved in spirits the whole of the viscera of two cats (one of which had died of the natural disease, and the other of the induced disease), and sent them to Calcutta to be examined by Drs. D. Cunningham and Lewis, whose report is appended. These two gentlemen say that the specimens sent "showed no anatomical or microscopical appearances which indicated that the animals from which they were taken had been affected by cholera or any similar disease"; but how they can express such a decided opinion I am at a loss to know, seeing that in their own published reports they have shown that nothing peculiar is to be found in cholera discharges which may not be found in other diarrhœal discharges—such, for instance, as are produced by fish poison or an overdose of Epsom salts.

The grounds upon which they would seem to have founded their opinion appear to be—(1st) that the intestinal contents gave an acid reaction with litmus paper; (2nd) that a round worm was found in the intestines which "frequently gives rise to intestinal disturbance and severe vomiting in their hosts"; and (3rd) that in an experiment made by them with two cats kept without food for twelve hours and then killed, the intestinal contents, according to their idea, were scarcely to be distinguished from the specimens sent down from Delhi.

With regard to the first of these grounds, I have merely to say that even in the cholera discharges in the human subject the reaction is sometimes acid; and it is impossible to say what effect the keeping in spirits may have had. In the only instance where I was myself able to examine the discharges of the cats with litmus paper, the reaction seemed to be almost neutral.

Regarding their second ground, I would say that I know of no intestinal worm which causes such rapid and fatal results. Neither is it of the nature of these parasites to kill their hosts.

As to their third ground of opinion, it seems to me that the result of their experiment with the two cats no more throws doubt on the nature of the disease which prevailed at Delhi than the fact that choleraic discharges may be produced in man by an overdose of Epsom salts proves that there is no such disease as cholera in the human subject. I have been unable to repeat their experiment to see how far in my estimation the appearances found resembled those in the diseased cats, but I may mention that although I examined a large number of cats which died while being experimented upon, also one or two which were killed for comparison, in none did the intestinal contents in any way resemble those of the cats which had died of the disease, but, on the contrary, they were in all cases of a dark colour and more or less solid.

In conclusion, I may say that my opinion regarding the choleraic nature of the disease is not solitary, but is supported by that of Dr. Paterson, H.M.'s 55th Regiment, of Dr. Johnson, 33rd N.I., and of Assistant-Surgeon Radha Kishen, all of whom took much interest in the subject.

APPENDIX.

Copy of the Notes made by Drs. Cunningham and Lewis of the examination of the Viscera of some Cats forwarded by Dr. Fairweather, Civil Surgeon, Delhi, and which were described as having died of Cholera; also, Notes of the examination of the Viscera of two healthy Cats, obtained for the purpose of comparison.

The specimens obtained from Delhi were examined between the 21st and 25th September, 1875.

Specimen 1, labeled "Piece of intestine (ligatured) of a cat (with its contents) which had died of natural cholera." In spirit.—The piece of intestine referred to was about six inches long, and ligatured at both ends; the enclosed piece consisting of the lower end of the ileum and the cæcum. The intestine appeared to be normal on its outer surface. It was cut into, and about twenty minims of colourless fluid, permanently acid to test-paper, was pressed out, together with whitish granular matter. The specimen was then slit up throughout its entire length, including the appendix vermiformis. The latter was nearly half filled with this whitish granular substance, and contained a few hairs. The gut was of normal thickness, and manifested no indications of extravasation having taken place.

Some of the granular matter from the vermiform appendage was transferred to a slide, and examined with a ¼ inch objective. It was found to consist mainly of amorphous granular matter and oily globules. There was an entire absence of cellular elements. There were also some tænia ova, fragments of young tæniæ, eggs of ascaris mystax, and one other form of ova of uncertain origin. The granular contents of the ileum were next submitted to similar examination, and found to consist of granular and cellular elements, mingled with an abundance of fat, but nothing whatever which a microscopist could say was of an unusual appearance. A scraping taken from beneath this pulpy layer consisted of the villi and cells of the mucous membrane, apparently in a normal condition. There were no blood-corpuscles in either layer.

Specimen 2, labeled "Viscera of a cat which died of natural cholera." In spirit.—The alimentary tube was ligatured at both ends. Large intestine: This, when slit up, was found to be lined with a layer of curdy matter. There was slight congestion both externally and on the mucous membrane. Small intestine. This was lined with a similar curdy matter, but was much drier and more adherent than that in the large intestine. A little spirituous, strongly acid, clear fluid was present. The coats of the intestine were thick and healthy-looking in every way. The trachea was dry and normal. Both sides of the heart full. The other viscera normal.

The curdy substance in both intestines was found, on microscopical examination, to consist of the ordinary mucous and epithelial matter of the intestine, somewhat hardened by the spirit. In some places the mucus was of a slightly pink tinge. There were no blood-corpuscles. In short, the substance consisted of the ordinary mucoid matter commonly found lining the intestines of cats and dogs. There were a few round worms scattered throughout the course of the intestine, and when the duodenum was reached it was found to be actually packed with these worms. The stomach also contained a considerable number, and the œsophagus, at its lower part especially, was literally plugged with them.

Specimen 3; labeled, "The viscera of a cat in which cholera was induced." Large intestine not supplied. The small intestine was present, and a ligature had been applied to its lower end. On cutting the ligatured extremity of this intestine, a few drops of whitish, creamy fluid were pressed out from the interior of the gut. The coats of the intestine were thick and healthy throughout. The contents of the gut were acid to test paper; nothing peculiar could be detected with the naked eye. There were a few tapeworms present, as also numerous round worms, differing, however, from the round worms in the other specimen, and they did not extend into the œsophagus. The stomach, however, contained fluid and worms. The lungs were completely collapsed and bloodless. Both sides of the heart were empty. The other organs, also, apparently healthy.

The few drops of fluid and granular matter contained in the gut presented, on microscopical examination, the same appearance as the contents of the intestines already referred to, and these were in no way distinguishable from the microscopic characters of the normal intestinal contents. There were no blood-cells.

Specimen 4, labeled "Worms taken out of the stomach of a cat which died of cholera."—There were two kinds of worm in this bottle: (1) the ordinary tapeworm of cats (tænia crassicollis), and (2) some round worms hitherto, so far as we have been able to learn by a somewhat extensive reference to helminthological authorities, not described as frequenting the alimentary canal of cats; indeed, we are inclined to look upon them as belonging to an undescribed species. The worm resembles more closely a species of physaloptera, which is known to be harboured by other species of the feline race—the puma and the cheetah—than any other parasite we can think of. The worms which plugged the duodenum and œsophagus in Specimen 2 were also of this kind, but the round worms which were found in Specimen 3 were specimens of the ordinary round worms of cats (ascaris dispar), which, as is well known, frequently give rise to intestinal disturbance and severe vomiting in their host.

The examination of the viscera of healthy cats.—In order to institute contemporaneous comparisons between the intestinal contents of the Delhi cats and the contents of similar animals in health, we kept two cats without food for twelve hours, and then placed them under the influence of chloroform until they died. The contents of the first intestine examined were of firmer consistence than similar material from the Delhi specimens, and not so white, but the reaction was acid, just as it was in preparations from Delhi. The contents of the second intestine, however, were quite fluid, and contained masses of flocculent, granular matter, which, allowing for the action of the spirit, was in no way distinguishable from the material described in connexion with the Delhi specimen. Portions of this gut were ligatured, and set aside in spirit for some days, and subjected to careful examination. It would have been extremely difficult, if not impossible, to have distinguished them from the Delhi specimens, either by the unaided senses or by microscopic examination. Neither of these two cats harboured the particular round worms found in the preparations from Delhi.

The specimens sent from Delhi showed no anatomical or microscopical appearances indicating that the animals from which they were obtained had been affected by cholera or any similar disease.

CARLO MATTEUCCI:

HIS MERITS IN PHYSIOLOGICAL AND MEDICAL PHYSICS.

BY MORITZ SCHIFF,

LATE OF THE FLORENTINE LABORATORY OF PHYSIOLOGY.

Translated by J. P. STEELE, B.A., M.D. EDIN.

(*Concluded from p.* 118.)

WE have already said that Matteucci in the field of animal electricity, properly so-called, appears to have taken as a starting-point anterior studies on electrical irritation. In fact, we already find in 1830 a first work of our author, which treats of the "Contraction experienced by Animals on the Opening of the Electric Circle in which they are found." It was published at Forli. Whether it is an accident, or a sign that the same theme occupied his mind all his life, his latest scientific works also treat of the cause of the contraction observed on opening the electric circle, which cause he had finally found in the polarisation of the nerve. It was, above all, that long and strong tetanic contraction which occurs at the opening of an ascending current of the nerve which for years had riveted his attention, and of which he explored the cause until, at the close of his career, he succeeded, by means of an ingenious combination, in shedding a ray on this point, the intelligent appreciation of which was possible only after new studies on the secondary polarisation of the animal tissues.

The interest awakened throughout all Europe by Faraday's work could not but find a response in the mind of Matteucci. Already, at the beginning of his career, he had sought to apply the new facts to the study of organic processes. His researches on the electrolytic decomposition of some organic fluids are interesting attempts which will have to be resumed one day when the advanced state of organic chemistry will admit of a better determination of the results obtained. It was an ingenious undertaking, which belongs originally to Thomas Young and to Wollaston (*Philosph. Mag.*, 1809, vol. xxxiii., p. 489), and which Matteucci revived to explain the different actions of the secretions by attributing them to electric tensions between the surface of the animal parts; but even this undertaking (*Annales de Chimie et de Physique*, 1830-34) had to be suspended because, after the existence of this current was experimentally proved, it became impossible to decide which of the two factors—i. e., current or chemical difference—is the cause, and which the effect.

Experiments on the electric irritation of the nerves, and on the law of electric contraction, furnished ample food to the zeal of Matteucci. These experiments, which are of great importance in the scientific point of view, are yet more so in the practical, because, in Matteucci's hands, they have become the basis of ELECTRO-THERAPEUTICS.

Matteucci, in this field, and as to the general results yielded by it, has not to any notable extent detached himself from Marianini and Nobili, his method of experimenting having been essentially that of his Italian predecessors. Nevertheless, we find in his memoirs on this subject, besides some methodic indications of high utility, a more precise appreciation of the results which could be obtained by this improved method, and new experiments demonstrate that the electric irritation of the sensory nerves offers in its results the greatest analogy with the irritation of motor nerves. This analogy, already surmised by Bellingeri and Marianini, becomes identity (always through the currents then in use), if the sensory nerve be considered as a motor nerve which runs in an inverse direction, and of which the action is expressed by a reflex movement. In our own day, the experiments of Pflüger have amply confirmed these previsions of Matteucci.

It is a merit of Matteucci's to have recognised that the centripetal (ascending) current, if it has run for a considerable time along a motor nerve, augments, after its opening, not only the excitation (this was already known to Ritter, with whose works Matteucci was unacquainted), but also the excitability. By this means was prepared an induction which has become almost a new revelation for the medical application of electricity. True it is that Matteucci has had to leave lacunæ in the proofs which he has given in favour of his thesis—lacunæ which he might in part have filled up, if he had cared to avail himself of the results already obtained in this field about the beginning of the century (1798) by Ritter and Pfaff. Suffice it to say that more than fifteen years after Matteucci's publication, an extended experimental research conducted by Heidenhain has completely justified its previsions as to the restorative action of the ascending current.

The most important discoveries of Matteucci relate to the physiological production of electricity in connexion with biological processes. In this field his services are so well and widely known that we can afford to be brief. For a long time a production of electricity was recognised almost as a miraculous exception to physiological law in electric fishes. The proofs which Galvani sought to give in favour of an electricity developed in the animal are, in part, of great value, but in the form in which Galvani presented them they have broken down under the criticism of Volta. Other suppositions, which are not unplentiful in the history of man and of electric animals, lack every trace of proof. Nobili in 1827 made the important discovery that a frog, either alive or sometimes after death, two points of whose length are in communication with a galvanometer, makes it deviate in the sense of a current, which in general goes from the hind feet to the head. This current is strong enough to irritate the nerves of another frog. Nobili calls this the "current proper" of the frog, without meaning to make out that it is inherent in the tissues of the animal. On the contrary, he employed all the acumen of his genius to uphold the supposition that the current proceeds from external causes and combinations, and that it is probably of a thermo-electric nature.

Much of Matteucci's research is occupied with this "current proper" of the frog. Its essential fruit has been the important conclusion that the current cannot depend either on a thermal or on a chemical difference in the primary sense of Volta; that it is, therefore, inherent in the animal body. This demonstration of a physiological current so struck the mind of the experimenter that every trace of animal electricity which, in the numerous researches this discovery prompted, was indicated by the galvanometer or the galvanoscopic frog, he regarded as proceeding from a current analogous to the "current proper" of the frog. A similar current came in this way to be attributed to all animals—to the frog mutilated and the frog excoriated, even to little fragments of animals. But after the first enthusiasm had given place to a more detailed analysis, Matteucci alighted on (in 1840) another important fact. He found in the muscles of warm-blooded as of cold-blooded animals that all the muscular groups manifest a current if a point of the interior of the muscle is connected by means of a conducting arch with a point of the surface.

This formula differs, however, from the general law of the muscular current which Du Bois had found in 1842 and

published in 1843. Du Bois speaks of "transverse cut, natural or artificial," instead of internal surface — of "longitudinal cut" instead of external surface; and so, according to his experiments, he very happily generalises the expressions of Matteucci, confirming at the same time the immediate results of his researches.

After the discovery of the muscular current Matteucci had to acknowledge that very many of the phenomena he had hitherto derived from the "current proper" belong to the muscular current. Analysis of facts showed him that, conformably with the views of Du Bois, in nearly all animals the muscular current suffices to explain all the phenomena he had observed, and that, strictly speaking, the frog alone evinces phenomena which seem to require for their explanation a "current proper" besides the muscular current.

It was not without hesitation that Matteucci brought himself to attribute all the phenomena to the muscular current. Up to 1845 he had resolved to save the "current proper" of the frog at least for the frog itself, and the subsequent history of animal electricity has shown that Matteucci was not badly guided by his instinct. It is now proved that in reality the current which Nobili and Matteucci had primarily called "proper" to the frog is, in fact, proper to that and to some other animals—that it does not proceed from the muscles, but that it is produced in the skin. In this view the frog really possesses at least two kinds of currents, as Matteucci had for a long time maintained: the current of the skin and the current of the muscles.

If it has not been given to Matteucci to discover the alteration of the muscular current which accompanies the contraction of the muscle, he has alighted on a curious and interesting phenomenon which stands in close relation with the oscillations of the current in the contraction—the "contraction," I mean, which he has called "induced." The fact consists in this: that if a frog's nerve is extended upon the length of the muscle of another frog, every time that this muscle contracts the nerve becomes irritated in such a manner as to induce secondary contraction of the muscles which stand in relation with this nerve. A third nerve may be extended over the muscle of the second frog, and in this way induce tertiary contraction or quaternary, &c. This singular phenomenon has all the appearance of an electric irritation, but some experiments undertaken to test the hypothesis of an electric origin of the contraction in question did not give Matteucci all the certainty which appeared to him necessary to affirm decisively that the phenomenon is the effect of an electric variation in the muscle. To-day it is no longer doubted that a rapid diminution in the muscular current of the "inducent" frog —a diminution which exists during the contraction—is the cause of the so-called induced contraction of Matteucci.

No one can occupy himself with the production of electricity in the animal body without taking into consideration the electric fishes, in which the electro-motor power is found developed to a high degree. With these Matteucci often and deeply busied himself, examining the discharge of the torpedo with all the means then available of physics. Linari, with the aid of Matteucci, has succeeded in drawing the electric spark from the torpedo. Savi, at Matteucci's instance, has given us a magnificent anatomical description of the nervous centres and of the electric organ of this fish, and Matteucci was thus enabled to win appreciation of the analogy which exists between this organ and the muscle—an analogy already vaguely surmised in past ages, according to which these electric organs were *musculi falcati* (scythe-shaped muscles). Matteucci hoped that a more minute microscopic analysis of the electric organ might yield still stronger support to this analogy; and this analysis, made but recently by Wagner, Valentin, and the other day by Boll and Ciaccio, has not falsified his expectation—at least in all that relates to the distribution of the nerves.

We have still to speak of the last works of Matteucci which treat of the polarisation of the nerves. In the second part of the third series of the "Memorie della Società dei XL.," 1868, p. 93, we find a memoir of his "Sulla teoria fisica dell' elettrotono dei Nervi," which contains, not all indeed, but the principal part of these researches. They give a very ingenious explanation of the phenomenon which, discovered by Du Bois, and described under the name of electrotone, was for some time regarded as a mysterious product of the particular structure of the nerves.

It is true, as Du Bois has already observed, that, among all the known organic tissues, the nerve alone shows the phenomenon described as electrotone, but it is an exaggeration to believe that these phenomena do not yield to physical analysis. Matteucci has proved that the electrotone, far from being uselessly connected with the functional property of the nerve, may be considered as a secondary current produced by the electrolyses which are deposited at various points when a constant current runs along it—on condition of that being admitted which had long been probable—viz., that the axis-cylinder of the nerve is a much more perfect conductor of electricity than its surrounding medulla, which has all the appearance of an oily liquid. Not content with theory, Matteucci demonstrated by experiment that every cylinder composed of a central nucleus, which is a good conductor of electricity, and of an electrolyte of great resistance, as a peripheral stratum shows all the characteristic phenomena of the electrotone if the central conductor is polarisable in the electrolytic solution.

In other works on the same theme, Matteucci has developed yet further results, which were the fruit of these researches on the secondary polarisation.

It cannot be said that these latest works of Matteucci were received with much applause on their first publication. Too pronounced was the antagonism in which he placed himself with generally accredited opinion, and too simple appeared the explanation proposed by him; because, if true, it would have had to remain concealed for so long a time, in spite of the interest which the electrotone had awakened among the cultivators of electro-physiology, the ranks of whom were every year increasing. But Matteucci could still see the triumph of his doctrine. His experiments were repeated, his findings confirmed, new observations poured in to substantiate his own, and to-day we can class these latest works of Matteucci on the secondary polarity as among the most meritorious which exist in the field of electro-physiology.

ON THE EQUALISATION OF LIGHT IN HOSPITALS AND ROOMS.

BY ROBERT MALLET, ESQ., C.E.

THE temperature of inhabited rooms has been rendered equable by means of the thermostat in connexion with a source of artificial heat and by other means, but no attempt that I am aware of has ever been made to devise apparatus by means of which the light which enters apartments, and more especially the wards of ophthalmic hospitals, might be rendered nearly uniform, whatever were the variations occurring in the amount of light at any moment coming from the sun. This varies not only with the period of the day or year, and with the serenity or obscurity of the sky, but also with every passing cloud; and in London, in the spring of the year especially, the constant transit over a sunlit sky of huge masses of opaque cumulous clouds, whose production is perhaps due to the wind setting over the hilly country which more or less surrounds the metropolis, produces a constant and rapid fluctuation of light, distressing to a healthy eye, and injurious to one diseased or overworked. This fluctuating light, which penetrates every apartment, is not, I believe, guarded against in the ophthalmic wards of any hospital in London, by any but the ineffectual provision of two sets of window-blinds, one set being quite opaque, the other of the ordinary white calico, sunlight filtered through which is, like the light passed through ground glass, distressing to all eyes. Though the production of a photostat, or apparatus for equalising the admission of daylight, is a much more delicate problem than that of the thermostat, it seems to me that in the present state of physical science the means may be devised for effecting the object sufficiently nearly for practical purposes, and I venture to recommend its consideration more especially to our electrical engineers or physicists. The problem can only be solved experimentally, and not without

the expenditure of thought, time, and labour, which, however, would in the end, probably well reward the successful inventor; for uniformity of light, if once attained by means neither very complicated nor expensive, would be adopted, not only in hospitals, &c., but eagerly sought for as an appliance in all libraries, reading-rooms, public offices, and the private studies of the richer classes. Something of the line of thought that may eventuate in this may be roughly sketched.

It may be assumed, as sufficiently near the truth, that, whether the sky be cloudy or serene and the light bright or sombre, the proportion between the luminous and the heat rays received at any moment of the day upon a unit of surface will be approximately the same. We might therefore employ the heat rays as the means of regulating those of light. If a large parabolic reflector, placed in a glass chamber, be mounted heliostatically, or so that it shall always face the direction of the sun, whether its disc be visible or not, and in its focus, where the parallel rays of the sunlight or daylight received by it converge, a thermopile be placed, we shall be in possession of a first mover, very small in power, indeed, but still sufficient, by a suitable intermediate train of apparatus, to maintain the necessary motions in the window-blinds, constructed of inclined parallel strips, upon the principle of those now well known which are called "helioscene blinds." The feeble current, ever varying with the intensity of external light, would be sufficient to move, more or less in a rotary direction, the card or index of a large galvanometer. If we imagine, at any one point of its circumference, a source of nearly constant heat, such as a Bunsen's burner, to be carried in one direction or the other by the motion of the galvanometer, we should possess the means of carrying this into greater or less proximity, or beneath a greater or less length of a compound thermostat bar formed of steel and zinc. The bending of this bar more or less by the difference in dilatation of the two metals would afford sufficient range and mechanical energy to be directly applied through the intervention of an adjustable rod to any one, and therefore to all, of the connected shades or slips of the helioscene blinds. Each slip being light, balanced upon its small horizontal axis, and having extremely little friction or inertia, a very small mechanical effort would suffice for changing the angle of hundreds of these shades so that the interstitial spaces admitting light from the outside should vary inversely as the intensity of the light to which they gave passage, and so the light within the apartment remain practically constant.

Many other analogous arrangements will occur to physicists and mechanicians accustomed to deal with the innumerable, delicate, and beautiful, though now common contrivances, by which electricity, heat, and light have been made subservient to our wants, and to such men I leave the pursuit of my rough suggestion, of which I am never likely to be able myself to attempt the realisation.

Perhaps, instead of the thermopile, an entirely different source of motion might be devised, based upon the curious difference in the electro-conductivity of selenium, dependent upon the intensity of the light to which it is exposed, and varying with that with extreme sensibility; this has been experimented upon by Herr Werner Siemens, of Berlin, a communication as to which he has addressed to the Academy of Sciences of that city, and of which some notice will be found in *Nature* for Dec. 9th, 1875, p. 112.

In conclusion, I may remark that one of the ablest oculists practising in London has assured me that the construction of an efficient photostat would confer a valuable boon upon his profession, and greatly relieve much human suffering. Comparative diagnoses of the power of vision of the same eye made at successive intervals must be subject to error where the same intensity of light cannot be insured for each examination.

Westminster Chambers, June 30th, 1876.

MR. HITCHINS, medical officer of health for Weston-super-Mare, reports that the health of that town is now exceptionally good. There has been very little sickness during the past quarter, and the mortality for the period was only 10·76 per thousand. The total births in the quarter had been 89, and the deaths (including those of visitors) 39.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

STRANGULATED INGUINAL HERNIA; OPERATION; RECOVERY.—STRANGULATED HERNIA; REDUCTION EN MASSE; OPERATION; RECOVERY.—CLINICAL REMARKS.

(Under the care of Mr. MAUNDER.)

FOR the notes of the subjoined interesting and instructive case we are indebted to Mr. E. J. Lawless.

William C——, aged thirty-four, was successfully operated upon by Mr. Maunder ten years ago for strangulated inguinal hernia of the left side. Since that time there has always been a small bubonocele on the same side, enlarging occasionally, but always easily reduced by the patient himself. He wore a truss, but left it off on finding the hernia still descended behind it. On May 22nd, 1876, the hernia descended, while he was at work, two or three times. On each occasion he put his hand down, gave it a touch, and it went back, but he noticed that the tumour disappeared in a somewhat unusual manner; to use his own expression, "it went up with a bang, and so quickly that I thought my head was off." This reduction afforded him no relief; he soon began to vomit, and continued to do so all night. On the morning of May 23rd he applied to a doctor, who gave him some pills and a draught, both of which his stomach rejected. He was then admitted into the hospital.

On examination there was no tumour in the inguinal canal, and, with the exception of a large external ring, no evidence that a hernia had existed. The man lay extended in bed, complained of some discomfort in his left groin, and vomited occasionally. There was a scar at the site of the former operation. Mr. Maunder advised immediate exploration, and the man at once consented.

An incision about two inches in length was made just above and parallel to Poupart's ligament, and close to the scar of the former operation. The inguinal canal was quickly laid open, but no evidence of hernia could be seen until, on further dissection, a kind of pouch in the areolar tissue was opened. Here the structures were slightly œdematous, and the finger carried to the depths of the wound detected a firm resisting swelling occupying the iliac fossa. On holding the edges of the wound apart, and carefully cleansing it, an opaque, pearly membrane was seen—the sac. A small puncture was made in this, and several ounces of discoloured serum escaped. The sac now became flaccid, and could be dragged readily out at the wound. It was then laid open, and a knuckle of highly congested intestine (strangulated twenty hours) was exposed, tightly constricted. The stricture was relieved in the usual way, and the bowel was returned into the cavity of the belly. A large extent of sac remained to be dealt with, and the greater part of this was cut away and allowed the neck to drop back into the wound. The incision was closed by suture, and a compress and bandage applied. Ordered to take calomel and opium freely; and should symptoms of peritonitis arise, venesection to be performed to ten ounces.

May 24th.—Passed a comfortable night, with the exception of an occasional vomit (chloroform).

25th.—Progressing favourably.

26th.—Bowels have been moved; the stitches have been removed, and some redness has appeared on the outer side of the wound. To take opium at longer intervals, to omit the calomel, and to have six ounces of wine.

30th.—The redness has disappeared, and the patient is doing well.

June 17th.—The patient is now convalescent.

Clinical remarks.—Mr. Maunder said that all who saw the

patient must have been struck by the almost total absence of all local symptoms as well as by the non-existence of constitutional disturbance, with the exception of occasional vomiting. The man occupied a comfortable position as he lay extended in bed, and complained only of slight discomfort in the left groin. The patient was made to stand and cough, the result being negative. Neither bulging nor tumour could be detected, either by the hand or when the abdomen was examined in profile. It might also have seemed remarkable that no evidence whatever of violent taxis existed (neither tenderness, swelling, nor ecchymosis of the integuments), but this was strictly in accordance with the history of the reduction given by the patient himself. Now this was a most important fact to bear in mind in connexion with this lesion, and is one to which special attention had been drawn by Messrs. Luke and John Birkett, because, should the practitioner suppose that great force is necessary to effect reduction *en masse*, he may be deceived into discrediting his patient, and an operation which should be *immediately* resorted to may thus be fatally postponed. Mr. Maunder had, he said, operated on at least 120 cases of strangulated hernia, but this was the first case of the kind that had come under his personal care. The probable explanation of the lesion was this:—The necessity for the first operation arose from strangulation following the sudden descent of bowel into the funicular portion of the vaginal process of the peritoneum. This operation had led to obliteration of that process, while the tendency to hernia persisted. This persistence, meeting with an obstacle in the shape of a truss and agglutinated structures in the inguinal canal, led to the formation, by continuous pressure, of an *intraparietal* sac, which formed a nest for itself in the position where there was least opposition, partly in the canal, but chiefly in the iliac fossa. At the same time the opening into the peritoneal cavity, which had corresponded to the internal abdominal ring, had been pushed away from this, and lay deeply placed within the abdominal parietes.

WESTMINSTER HOSPITAL.

PARALYSIS FOLLOWING A BLOW ON THE HEAD; RECOVERY.

(Under the care of Mr. DAVY.)

For the following notes we are indebted to Mr. George F. Poynder, house-surgeon.

Philip L——, aged forty-nine, was admitted into Henry Hoare ward on June 20th, 1876, at 7.30 P.M. The account of his accident was as follows. In the evening, about an hour before admission, the patient was walking down the stairs of the Underground Railway, when his foot slipped on the brass edging of the steps, and he fell about twenty steps, striking his head, face, and left shoulder. He had been drinking before the accident, but was able to walk without staggering. He was stunned by the fall, and when he recovered consciousness he found himself being carried through the streets on a stretcher.

On admission he was sensible; complained of pain in left shoulder; pupils dilated; breath smelt strongly of alcoholic liquor; face drawn to the left; tongue protruded to the left; able to move both legs—right rather more freely than left; pulse normal; slight graze and bruising of scalp on upper and back part of right side of head; bruise over spine of left scapula and over crest of left os innominatum. At 10 P.M. he seemed better; protruded his tongue in a straight line. Got out of bed during the evening to micturate, but fell down and had to be raised. Had no difficulty in passing urine. Did not know what caused him to fall, except that his legs seemed to give under him.

June 21st.—Feels much better, but did not get much sleep through the night. Pupils normal; tongue protruded in a straight line; bowels open; able to walk across the ward; face still drawn to the left, but not so markedly as yesterday, not noticed by patient when he looked at his face in a glass; able to move his forearm on his arm, but cannot lift his arm from the side without assistance; can grasp pretty well with his left hand, but not nearly so firmly as with the right.

22nd.—Slept well; moves forearm a little more freely than yesterday; bowels acted; tongue clean.

23rd.—Feels better; able to raise arm from side, when he starts it by raising the elbow slightly with the other hand; bowels open twice.

24th.—Better again this morning; slept well. Pulse 80. Able to raise his arm over his head to-day slowly without any assistance from the sound arm.

25th.—Able to raise the arm more easily to-day, but still suffers slight pain in the shoulders when he moves his arm.

27th.—Patient was up for a short time yesterday, and felt all the better for it. Is able to grasp with the left hand almost as well as with the right.

28th.—As the patient was anxious to return to his work he was discharged. He was not able to move his arm quite so freely to-day, as it feels stiff—caused, he thinks, by his sleeping under one of the ward windows without a flannel shirt,—but he is able to use the affected arm as readily as the sound arm for ordinary purposes. Face still slightly drawn to the left, but not noticed by himself.

Remarks.—The speedy recovery made by the man from the commencement is curious, as it began very soon after the time that he regained consciousness, and steadily continued till his discharge from the hospital. The diagnosis was that pressure had existed probably at the floor of the fourth ventricle, and in the vicinity of the right corpus striatum, the gradual subsidence of which was coincident with his speedy improvement.

BRISTOL ROYAL INFIRMARY.

TWO CASES OF SUNSTROKE, WITH UNUSUALLY HIGH TEMPERATURE ("THERMIC FEVER"); DEATH.

(Under the care of Dr. SHINGLETON SMITH.)

THE following records of three severe cases of sunstroke are especially interesting at this hot season. The effects of the injection of quinine in Mr. Fox's case are worthy of note.

CASE 1.—J. B——, aged about forty-five, a labourer, was admitted on July 15th, 1876, at half-past one P.M. Had been working on board a steamship from eight A.M. turning a winch, exposed to the full glare of the sun. At one o'clock he complained of feeling unwell, and went away from his work to lie down and rest in a neighbouring tavern; a few minutes afterwards he began to talk incoherently, became pale, and then insensible, throwing about his arms and legs. He had been drinking water freely during the morning, and at eleven o'clock had one pint of beer.

On admission he was deeply comatose, with pupils contracted to pin-points; his breathing was laboured, and the pulse was 160, weak and intermittent. Face was not noticeably flushed, and skin was perspiring freely. His temperature at 1.45 P.M. was 107°F; at 1.55, 108°; 2.5, 108·8°; 2.12, 109°; 2.17, 109°; 2.22, 108·8°; 2.37, 108°; 3.5, 106·8°; 4.7, 105·4°; 5.7, 103·8; 6.7, 102·2°; 6.37, 101°; 7.12, 99·8°; 7.40, 100·4°. The temperature was taken at intervals of about ten minutes, by Mr. H. M. Chute, the house-surgeon, and the above extracts indicate the principal thermometric variations. Immediately on admission, ice was applied to the head, and kept in close and constant contact by a nurse whose sole duty it was to see to this, and iced water was applied to the body by means of Roberts's coils, two of them being used, one over the patient's chest and abdomen, the other being placed underneath the patient as he lay on his back. On administering fluid by the mouth, it was found that there was considerable risk of its entering the trachea; accordingly, two ounces of brandy were given as an enema, simply diluted with water. Afterwards the patient's ability to swallow improved, and he took brandy by the mouth. Altogether, seven ounces of brandy were given in about six hours. At 3.30 it was noticed that there was some twitching of the eyebrows and eyelids; the pupils were becoming less contracted. Pulse 128; respiration 40. At 4.15 the pupils were of normal size, and the conjunctivæ were slightly sensitive. At 4.25 the pulse was so weak that it could not be counted, and there was general tremor of the limbs. The pupils were sensitive to light. After this the pulse improved in character, but at 6·47 it was again too weak to be counted, the respiration became more laboured, and the pupils were dilating. Both coils were removed, dry blankets applied, and hot-water bottles kept to the feet. About eight minims of solution of ammonia,

diluted with water to an ounce and a half, were injected into the median cephalic vein, but no improvement was manifested, and the patient died at 7.50 P.M.

The temperature of the water as it entered the coil was about 40°; after passing through the coil it varied from 70° to 59°, the greatest difference between that in the pan above and that in the pan below being 27°.

Autopsy, seventeen hours after death.—There was much post-mortem lividity, and numerous petechial spots were visible. The cerebral veins and sinuses were full, and the grey matter both at surface and of central ganglia was of a dark purplish tint, the white matter having numerous bloody points. There was a very large amount of subarachnoid fluid at the surface, and an excess of fluid in the ventricles. The blood was everywhere fluid, of very dark colour, and containing numerous air-bubbles (from decomposition). The thoracic organs presented the usual appearance of death by slow asphyxia.

The highest shade temperature recorded in Bristol on this day, July 15th, 1876, was 96 in a rather exposed situation, but in a more sheltered spot it was found by Dr. Burder to be 92·3°.

CASE 2.—M. C——, aged about thirty-five, a soldier, on his way home to Ireland on furlough from India, was admitted on July 15th, at 8.45 P.M. Had been seen by a policeman to be unsteady in his walk, was taken to the police-station on a stretcher, and then sent to the infirmary.

On admission he was only partially conscious, could not give his name, and could not walk. There was general muscular tremor, and soon after general convulsions, with marked opisthotonos. The temperature was found to be 110·2°; the pulse was small, and too rapid to count; the respiration very laboured. He became completely comatose, with pupils insensible to light, and contracted. The temperature taken again was found to be 111°. Death took place about twenty minutes after his admission. Five minutes after death the temperature, taken in left axilla (as before), was found to be 110·4°.

The autopsy showed intense engorgement of the cerebral veins and sinuses, without subarachnoid effusion. Blood black and fluid, with less decided indications of asphyxia than in the other case, death having resulted apparently from cardiac paralysis.

These cases seem to be typical illustrations of a form of disease almost unknown in this country, but familiar to Indian and also to American practitioners. Slighter cases of sunstroke, classed by Sir J. Fayrer under the heading "heat exhaustion," are the only ones ordinarily met with in our latitudes (of these three cases have come under Dr. Smith's own observation during the last week); but the exceptional cases, classed as "thermic fever," of which the two reported are instances, seem to be well worthy of record. Another case, admitted under the care of Dr. E. L. Fox, in which the patient was comatose, with a temperature of 107°, treated by hypodermic injection of quinine, has resulted in complete recovery. The following are the notes of this case:—

CASE OF SUNSTROKE; HIGH TEMPERATURE; SUBCUTANEOUS INJECTION OF QUININE; RECOVERY.

(Under the care of Dr. E. L. FOX.)

For the following notes we are indebted to Mr. H. M. Chute, house-surgeon.

CASE 3.—Thomas C——, aged fifty-five, was admitted on Monday afternoon, July 17th, suffering from sunstroke. At 2 P.M. he was driving a hearse, was seen to fall back, and the reins to drop from his hands. He was taken off the box of the hearse, and brought to the infirmary immediately.

At 2.30 P.M. reached the infirmary. Was comatose; tonic spasm of muscles of legs; pupils contracted, but sensible to light; skin pungently hot and burning to the hand; complete absence of perspiration; respiration stertorous.—2.40: Temperature 106·4° F.; pulse 141, full and hard; respiration 27, whiffing and stertorous. Twenty grains of quinine was dissolved in about a drachm of dilute sulphuric acid and half an ounce of distilled water; of this one drachm was injected under the skin at various places—scalp, pectorals, arms—in quantities of six minims at a time. Scalp rubbed continuously with a block of ice. He was stripped naked, and laid on Roberts's coil, through which water of 41° temperature was flowing; another coil applied to abdomen and chest.—2.50: Temperature 107°; slight indications of returning consciousness.—3 P.M.: Temperature 106°; pulse 126, small. Is a little restless, semi-conscious, answers questions incoherently when spoken to loudly; eyes open; blinking eyelids. Temperature of pan No. 1, 41°; temperature of pan No. 2, 72°. Ten grains of quinine, and one ounce of brandy in two ounces of water, swallowed.—3.10: Temperature 105°, talking incoherently; pulse 128, stronger, fuller, and regular. Answers questions and can tell his name.—3.20: No headache or pain anywhere; no sickness; breathes easily.—3.25: Coil over abdomen and chest removed; temperature 102°; says he has not been driving at all (not in accordance with actual fact), but has only been attending horses. Pulse 141; respiration 40.—3.30: Feels sleepy; pulse full and strong; says he "shall be all right if he can get an hour's sleep."—3.40: Temperature 100°; pulse 125, strong and full; coil at back removed; dry blankets applied; is very sleepy.—3.50: Fell asleep; removed to ward.

July 18th.—Has had a good night and is quite sensible. Says he has not been accustomed to drink much as a rule, but during the last week he has taken more than usual; intoxicated more than once. He now remembers having been driving a hearse at midday yesterday, but has no recollection of anything that passed between the time when he was on the hearse and when he recovered consciousness in the casualty-room, having his head cooled with ice. Had no headache, sickness, or premonitory symptom except sleepiness and dulness. Was thickly clad, and wore a "toupet." Pulse 68, full and strong; no headache; no pain or sign of irritation at seat of punctures.

20th.—Discharged cured.

Reviews and Notices of Books.

The Cholera Epidemic of 1873 in the United States. Washington: Government Printing Office. 1875.

THE cholera epidemic of 1873 in the United States was one of the most interesting episodes in the migrations of the Indian pestilence. It occurred at a period when cholera had for some time ceased in North America, when in Europe (the usual source from which America has received the infection of the disease) the epidemic which, beginning in 1865, and resuscitated in 1869, was at length dying out, and when there was no certain knowledge of the presence of the disease at any other point from which the United States was likely to receive it. The outbreak began in New Orleans, and, spreading thence, extended along the valley of the Mississippi and its affluents, occupying an immense tract of country, but not becoming general throughout the States. It was, in reality, a local outbreak, confined almost wholly to the valley of the Mississippi, but its localisation was of proportions as vast as the basin of the mighty stream within which it occurred. The great interest of this outbreak rested with its commencement. After the disease had declared itself at New Orleans, its extension along the course of the river towards the head waters, and its dissemination within the basin, differed in no wise from what had been observed in previous extensions of the malady in the United States. In the earlier instances, and before the disease had become too widely scattered to be readily followed in detail, the first fact of appearance of the malady was its certain or presumable importation from a previously infected place. But while the infection of places after New Orleans could thus be connected, directly or indirectly, with the transmission of the malady from that city, in New Orleans itself the case was far otherwise. Here the chain of connexion lapsed, and there appeared to be no possibility of assigning the outbreak of the disease there to importation of the infection from some infected place with which New Orleans was in communication.

Now, the outbreak of cholera in New Orleans in 1873

occurred under circumstances seemingly most favourable for observation. Louisiana has an active Board of Health under the presidency of Dr. C. B. White. When fatal cases of cholera began to multiply in the town, very active steps were taken by this Board to ascertain the history of all the earlier cases, and it was found possible to subject the first twenty-five to a close examination. The results of this examination, which seemed to preclude sources of fallacy, are given in detail in the report of the Board for 1873, and appear to show conclusively that the cholera had not been derived from without; in other words, that it had not been imported into New Orleans, but was of local origin. So convinced was the Board of this local origin, that it came to the conclusion that the disease was not Asiatic cholera at all, refusing to believe that Asiatic cholera would differ in the phenomena of its movements then and there from what had been regularly observed of its movements in previous outbreaks, not only in Orleans but elsewhere. It concluded, indeed, that the disease was the common cholera morbus of the United States occurring in a more aggravated form, and more prevalently during a period of exceptional heat. This being the apparent case in New Orleans, the development of the fatal choleraic disease elsewhere in the basin of the Mississippi presumably depended upon local conditions of temperature similar to those observed in New Orleans, and facts of assumed importation were held to be simply facts of coincidence. As, however, the details of the different outbreaks of cholera along the course of the Mississippi and its affluents came to be more clearly known, it became impossible to accept this, in reality, cutting of the knot. The disease, after its appearance in New Orleans, clearly could not be distinguished, in its symptoms, its course, and its manner of dissemination, from Asiatic cholera; and it seemed likely that this outbreak would become one of the greatest of epidemiological puzzles if it did not afford the solution of one of the most difficult of epidemiological questions.

The importance of the outbreak, as well from its manner of origin as from its magnitude, fortunately induced Congress to institute an official inquiry into its beginning and diffusion. The result of this inquiry we have now before us in the form of a portly volume abounding in valuable materials relating not only to the outbreak of 1873, but also to previous outbreaks of cholera in the United States. The volume, issued from the Department of the Surgeon-General of the Army, is done by several hands, under the general editorship of Dr. Ely McClellan, Assistant-Surgeon, U.S.A. Dr. Woodworth, the Supervising Surgeon U.S. (Merchant) Marine Hospital Service, contributes a paper on the Introduction of Epidemic Cholera through the Agency of the Mercantile Marine, with Suggestions of Measures of Prevention; Dr. Ely McClellan, a History of the Cholera Epidemic of 1873 in the United States, and of previous visitations of cholera in North America; Dr. John C. Peters, of New York City, a History of the Travels of Cholera in Asia and Europe; and Dr. John S. Billings, Assistant-Surgeon, U.S.A., a Bibliography of Cholera. The chief interest of the volume this side the Atlantic necessarily rests with that portion of it which relates to America. Dr. Peters's report on the different migrations of cholera from India treats of a subject which has well-nigh been exhausted in English cholera literature. Dr. Peters's data differ in many respects from those contained in English histories of these migrations, but he is so sparing of references that it is not easy to get the clue to the sources of his data. For example, it is impossible to reconcile his account of the origin and diffusion of the epidemic which invaded Europe in 1865 with the official English reports on the subject, and with the Report of the International Sanitary Conference of 1866. From the number of obvious press errors in this report we are led to surmise that the report must have passed through the press without the author's corrections. If this be the case it is much to be regretted that the report should have been issued without a table of corrections. Errors of date, fixed in type, have been one of the most mischievous sources of confusion in tracing the connexions of outbreaks of cholera. Dr. Billings' "Bibliography of Cholera" is probably the most extensive which has yet been prepared, and it must prove of considerable use to epidemiologists.

The contents of the volume which refer to cholera in North America, whether as regards the outbreak of 1873 or as regards previous outbreaks, are of the greatest interest and value. The report on the outbreak of 1873 includes a large number of reports on the local appearances of the disease within the area it invaded by local observers. These reports are frequently illustrated with maps of the towns or districts invaded. The medical contributors to the report from the invaded area are, indeed, very numerous, and in the absence of any general method of recording mortality and its causes in the United States, it is to the great honour of the profession that its members should have come forward so largely and so willingly to aid Dr. McClellan in the difficult task which had been imposed upon him by Congress.

It would be impossible, in the space at our disposal, to follow the course of the epidemic in the different States invaded by it. We shall limit our attention to that portion of the report which deals with the beginning of the outbreak in New Orleans, this question being of chiefest interest. A further inquiry was made into the outbreak here by Assistant-Surgeon Van Buren Hubbard, U.S.A. The results of this inquiry, as relates to the possible introduction of the disease from without, are of the greatest moment. The information which had been supplied to the Louisiana Board of Health from the quarantine medical officer seemed to set wholly at rest the possibility of cholera having passed into the port from abroad. Dr. Hubbard ascertained that at the very period when such passage, judging from the events in the city, was to have been suspected, the quarantine authorities and medical officer had no information relative to the state of health of crews and passengers of incoming ships other than was vouchsafed by the captain to certain questions put to him at the ship's side. In other words, the inquiry had failed in precision at the very point at which precision was most needed, and there can be no doubt that the clue to the outbreak was lost from this failure. Whether it will ever be recovered now cannot be surmised, but after the recent recovery of the clue to the Southampton outbreak of 1866, we may hope that of the New Orleans outbreak in 1873 will still be forthcoming.

The Journal of Anatomy and Physiology. Conducted by Professors HUMPHRY, TURNER, FOSTER, and RUTHERFORD. Vol. X., Part IV. July, 1876.

THIS part completes the tenth volume of the Journal. It contains the following memoirs:—1. On the Comparison of the Fore and Hind Limbs in Vertebrates, by Professor Humphry. In this paper the author opposes the view of Dr. Albrecht, recently advanced, that the "radius is originally situated, internally, upon the inner condyle of the humerus, and gradually passes in front of the ulna preaxially, to gain its final position upon the outer condyle," thus originally occupying "a place corresponding with that of the tibia upon the inner condyle of the femur." Prof. Humphry's arguments are drawn from a consideration of the position of the bones in the Enaliosauric amphibians

and reptiles (phytogeny), from a consideration of the process of development in the individual (ontogeny), and from a consideration of the course of the nerves. 2. Mr. Balfour continues his account of the Development of the Elasmobranch Fishes. In mastering the subject of the development of these relics of a bygone age, Mr. Balfour has struck on a most valuable mine of discovery which has already well rewarded his labours. The paper is accompanied by a plate. 3. The same observer describes the Spinal Nerves of Amphioxus, and states that the nerves of opposite sides arise *alternately*, but have apparently only a *single dorsal* root; each nerve supplies a single myotome. 3. Prof. Turner gives an account of the Placentation of the Cape Anteater (Orycteropus capensis), showing that it is of the zonary type. 4. Mr. G. J. Romanes offers "Some Observations on the Galvanic Excitation of Nerve and Muscle, with especial reference to the modification of the excitability of motor nerves produced by injury." This paper is of considerable interest. Mr. Romanes was led to the inquiry by observing that injury of a motor nerve is followed by a very marked and very peculiar alteration in its behaviour towards voltaic stimuli; the nerve becomes extremely sensitive to the excitation supplied by the descending break. On following out this subject, he shows, as the result of numerous experiments, that while both muscle and central nervous matter are able, though in opposite ways, to distinguish between anodic and cathodic closure, peripheral nervous matter is quite unable to do so. 5. Prof. Michael Foster and Mr. A. G. Dew-Smith describe the Effects of the Constant Current on the Heart. They observe that rhythmical contractions can be obtained (in the frog and dogfish) from the isolated lower two-thirds of the ventricle. In very many cases the making beat was distinctly seen to proceed from the cathode and to travel towards the anode, and the breaking beat to proceed from the anode and to travel towards the cathode. The retention of a small bridge between the longitudinally divided lower two-thirds of the ventricle was quite sufficient to set the whole mass in motion, thus corroborating the view of the physiological continuity of the whole ventricular tissue. The authors describe the effects of constant currents also on the whole ventricle when quiescent and when beating rhythmically, and the effects of the same on both auricle and ventricle when removed from the body, full and empty, &c. They were unable to obtain any phenomena which they could satisfactorily attribute to the action of the constant current on the termination of the vagus fibres or on the various inhibitory and other mechanisms existing or supposed to exist in the vertebrate heart. On the contrary, they found that the most important and active nervous mechanisms of the heart were able fully to exert their influence in spite of a powerful constant current being passed through the heart. They conclude that the well-known, easily recognised ganglia of the heart play a subordinate part in the production of the heart's spontaneous rhythmic pulsations. The real origin of these is to be sought for in the phenomena of muscular tissue, unless some new form of nervous tissue which has hitherto escaped detection be discovered. 7. Mr. Schäfer supplies a contribution to the history of the Development of the Guinea-pig, which is the commencement of a series of articles on this exceptional form. 7. Dr. Stirling calls attention to the value of a dilute solution of Alcohol as a reagent for Blood-discs, bringing out their nuclei and nucleoli with great distinctness. Lastly, a translation appears of a paper by Prof. Rokitansky, on "Malformation of the Cardiac Septa," and of a short paper by E. Forster Brockman, on "Atrophy of Right Hemisphere of Cerebrum, Left Side of Cerebellum, and Left Half of Body."

OUR LIBRARY TABLE.

The State of the Medical Profession in Great Britain and Ireland. By WILLIAM DALE, M.D. Lond. Being the successful Carmichael Prize Essay, 1873. Dublin: J. Atkinson and Co.—It may be remembered that the late Mr. Carmichael left a sum of £3000 to the Royal College of Surgeons of Ireland, the interest on which was to be given every fourth year for essays (£200 for the best and £100 for the second best) on the state of the profession in its different departments. The successful essay by Dr. Dale now before us may be perused with advantage. It is written in a light, sketchy, and pleasant manner. The author notices first the great want of uniformity in the professional education demanded by the different licensing corporations, and then considers the question of the preliminary education of medical students, pointing out a list of subjects he believes to be sufficient, and not forgetting the moral aspect of the question. The condition of hospitals and schools of medicine is then commented on, after which the state of the examining corporations is reviewed, together with the mode of examination adopted by each. An addendum to the essay contains some useful information respecting the comparative cost of education at the different hospitals, &c.

Literary Remains of Langston Parker, F.R.C.S. Edited by WM. BATES, B.A.—This volume, containing a reprint of lectures delivered forty years ago, and now offered by filial affection only in submission to the advice of judicious friends, "is hardly intended for the general public, but rather for those old and personal friends of its author, to whom its limited issue will restrict it"; yet to the many who have known Mr. Parker by his professional writings only, it cannot but be interesting to be admitted behind the veil, and to see the mind which they admired in its maturity exercising and disporting itself in its earlier development. An excellent biography, accompanied by a photographic likeness, precedes the lectures, and makes the whole a pleasing souvenir of one of whom our profession is justly proud.

The Book of Prescriptions. Containing more than 3000 Prescriptions. By HENRY BEASLEY. Fifth Edition. London: Churchills. 1876.—We need do nothing beyond announce the fact that this is a new edition—the fifth—of a well-known book. It has undergone revision, and a number of old have been replaced by new formulæ.

A Lecture on the Brussels Conference of 1874 and other Diplomatic Attempts to mitigate the Rigor of Warfare. Delivered at All Soul's College, May 10th, 1876. By THOMAS ERSKINE HOLLAND, D.C.L., Barrister-at-Law, &c. Oxford and London: James Parker and Co. 1876.—An instructive, well-considered lecture, containing a large amount of information in a small space.

"PASS" AND "PLUCK" AT THE ROYAL COLLEGE OF SURGEONS.

WE published last week the customary annual report from the Court of Examiners of the number of candidates who have presented themselves for the Primary and Pass Examinations for the Diploma of Member of the College of Surgeons during the year 1875-76, showing the number who have passed and who have been rejected from each medical school during that period. The present report, albeit not quite accurate, is of especial interest, as it embodies the results of most of the examinations which have been conducted by the newly-constituted Board of Examiners.

We are reluctant to impeach the accuracy of these tables

without sufficient ground, and we could willingly overlook some trifling errors in the addition of fractions (such as 8·83 + 7·50 = 16·66, or 6·66 + 5·50 = 11·83), which do not affect the general result, for the College of Surgeons is not a body habitually given to minute statistical details, nor does it grant degrees in mathematics; but if any of our readers will take the trouble to add up the columns in the "Pass" table, they will at once detect errors which have at least the effect of altering the grand total of rejected candidates and of lowering the mean percentage rate of rejection from 24·5 (or 1 in 4·11) to 25·6 (or 1 in 3·9). The figures at the foot of the columns should be 508, 378, and 130, instead of 498, 377, and 121.

With this rectification, then, we find that the total number of candidates presenting themselves for the Primary Examination was 700, of whom 198 were sent up wholly or partially (for instance, Cork furnished but half a man, who passed) from the provincial schools. Last year the total was 727, the provinces contributing 217; and in 1872–3, there were 702 candidates. Out of these 700 there were referred 257, or 1 in every 2·72 candidates, this being the highest percentage—namely, 36·6—of rejections in any of the five years during which these returns have been made. Last year it was 30·5, or 1 in 3·26; and the year before it was 35·4, or 1 in 2·82. Of the 508 candidates who presented themselves at the Pass Examination, as against 518 last year, 116 came from provincial schools, and 130 were rejected, the proportion being, as above stated, 1 in 3·9, or 25·6 per cent. Last year 24·3 per cent., or 1 in 4·11, were referred.

For the Primary Examinations no metropolitan school has had so few rejections as Guy's last year, with its percentage of 15·3, or 1 in 6·5; the Middlesex having this year the fewest rejections, with a percentage of 24·3, or 1 in 4·11 out of 18·5 candidates. Last year this school sent up 26·5 candidates, of whom 1 in 2·65 were referred; and in 1873–4 it was lowest in the list, with a rejection-rate of 1 in 1·8, which is exceeded this year by the London and Charing-cross Hospitals, which, out of 48·66 and 9·5 candidates, have had referred respectively 1 in 1·7 and 1 in 1·72. In 1873–4 the London Hospital, with 28 candidates, was first, with a percentage of 21·4 rejections (or 1 in 4·66). The largest number of candidates came from St. Bartholomew's—viz., 98, and as regards the proportion of rejections this school stands second, with 1 in 3·96. Westminster takes a better position than last year, sending 16·66 candidates, with a percentage of 46 rejections, as compared with 80 per cent. last year.

Of the provincial schools, Toronto, which last year sent up three candidates, two of whom were referred, has this year furnished 8·5, one only of whom has been rejected. Manchester sent the largest number of candidates, 32·5, of whom 9·5 were rejected, or 29·2 per cent. Birmingham takes a better position, with 1 in 5·33 rejections out of 24 candidates; and Liverpool is much lower, with 1 in 2·2 referred out of 25·66 candidates. Bristol only succeeded in passing 1 candidate out of 9.

For the Pass Examination the chief place is taken by St. Thomas's, with 41·41 candidates, of whom 1 in 7·1, or 14 per cent., were rejected. University College comes next, with a percentage of 15·6 (or 1 in 6·39) rejections out of the large number of 78·91 candidates; which, we may remark, is the largest number of candidates sent up for this examination by any school during the past five years, with the exception of Guy's, which in 1874-75 sent up 96·83, of whom 1 in 4·21 were referred. This year Guy's sent 77, and 1 in 4·37 were rejected. The lowest place in the Pass Examination is taken by King's College, with a percentage of 47·1 rejections (or 1 in 2·12) out of 34 candidates. Westminster sent up only 3·66, of whom 2 passed. Cambridge stands high, with a rejection of only 1 in 11, this result depending on the failure of half a man out of 55 candidates! Edinburgh furnished the largest number of candidates from the provincial schools—namely, 17·5; and equalled St. George's in its proportion of rejections—namely, 1 in 5. Leeds took a very low position, with 1 in 1·85 rejections, or 7 out of 13 candidates.

These returns have now been made for five years, and as it is obviously impossible to draw any just conclusions as to the position of a school from one year's return, owing to the small number of candidates presenting themselves from some of the schools, it may prove of interest if we collate the results during this period, leaving our readers to draw their own conclusions. Since 1871-2 there have been sent up from the metropolitan schools for the primary examination no fewer than 2431·66 candidates; Guy's has sent 476, of whom 1 in 3·88 have been rejected; University College 417, with 1 in 3 rejections; St. Bartholomew's 409·83, with 1 in 4; St. Thomas's 288·3, with 1 in 2·8; King's College 197, with 1 in 3·31; London 180·67, with 1 in 2·46; St. George's 164·5, with 1 in 3·22; St. Mary's 105·5, with 1 in 3·76; Middlesex 88·16, with 1 in 2·8; Charing-cross 79, with 1 in 2·25; and Westminster 55·66, with 1 in 2·11. For the Pass Examination during the same period 1818·16 candidates have come from these eleven schools. Guy's has sent 423·33, with 1 in 4·2 rejections; St. Bartholomew's 319·38, with 1 in 4·8; University College 296·57, with 1 in 5·95; St. Thomas's 181·24, with 1 in 5·6; King's College 157·83, with 1 in 2·89; St. George's 113, with 1 in 4·31; London 111·33, with 1 in 4·94; St. Mary's 80·66, with 1 in 3·72; Charing-cross 54, with 1 in 2·7; Middlesex 53·16, with 1 in 4·62; and Westminster 19·66, with 1 in 4·21 rejections.

Finally, the total number of rejected candidates in this period has been—for the Primary Examination, 771, giving a mean rate of rejections as low as 1 in 2·76. For the Pass the numbers are 412, or 1 in 4·4.

UNIVERSITY OF OTAGO, NEW ZEALAND.

THIS young University, situated in Dunedin, gives early promise of becoming, at no distant date, an important medical centre. Although not at present a complete medical school, it possesses the three grand requisites for a very successful school in the future—viz., an extensive hospital, a capacious dissecting-room, and an unlimited supply of subjects. The authorities are zealously anxious to assimilate their university to similar institutions in the mother country, and to have their labours recognised by British teachers. With this object in view, they have instituted a preliminary medical examination which satisfies the General Medical Council and the several licensing bodies, while qualifying lectures are given in the various subjects of the medical curriculum. It is intended to give the students two *anni medici*, which shall qualify for all British degrees, and then to send the young men to this country to complete their studies and obtain their degrees. The Otago University is content at present to act as a feeder to and dependent of the older British Universities. The following is a list of the classes proposed:—1, Zoology; 2, Botany; 3, Anatomy; 4, Chemistry; and 5, Hospital practice and clinical teaching. The scheme appears to be a highly feasible one, and we heartily wish it success; for we hail with satisfaction any attempt at university extension and consolidation of medical interests, whether at the antipodes or at home.

SOCIAL SCIENCE CONGRESS.

THE following are the special questions for discussion in the Health Department of the Social Science Congress, to be held at Liverpool in October next:—

1. What is the best means of making provision for the supply and storage of water—(a) in large towns such as Liverpool and Manchester; (b) in groups of urban communities of lesser size, such as exist in the manufacturing districts of Lancashire and Yorkshire?

2. What further legal enactments, if any, are required with a view to arrest the spread of infectious fever, and how far is national and municipal registration desirable as a means thereto, and if so, what should be the nature of such registration?

3. What amendments are required in the legislation necessary to prevent the evils arising from noxious vapours and smoke?

THE LANCET.

LONDON: SATURDAY, JULY 29, 1876.

We summarised last week very briefly the contents of the last Report on Public Health presented by Mr. SIMON as Medical Officer of the Privy Council and Local Government Board to the President of the latter department. But setting aside details, this Report is specially noteworthy in that it marks (as the last written by Mr. SIMON in his official capacity of chief sanitary adviser to the Government) an epoch in the history of public health; and the Report also claims special notice because the writer, intentionally or not, has indicated in it very categorically the line of action to be adopted, and the distinct varieties of work to be done in the future by the Medical Department. These divisions of work relate severally to (1) vaccination, (2) local inquiries made with regard to particular facts of disease in particular places, (3) general inquiries relating to the origin and propagation of particular diseases, and (4) the progress of foreign epidemics.

The administration of the laws relating to vaccination has now for some time received a proper amount of attention, and, thanks to the exertions of Mr. SIMON and Dr. SEATON, the results are, as we indicated last week, superlatively satisfactory. The organisation of the working staff throughout the kingdom, and of the inspectorial system at headquarters, was a work of no small difficulty; but both are now in excellent order, and, in spite of the obstinacy of some few local magnates, as at Keighley, we may fairly pronounce the Vaccination Department to be the most perfectly arranged system of preventive medicine in the United Kingdom. In the matter of local inquiries made with regard to particular outbreaks of disease, it is astonishing, as compared with vaccination, to see how very little has been done. A total of twenty-seven inquiries made during the year in England and Wales, with its 1557 sanitary areas, must represent but a very small proportion of the work that might have been done in this direction if the sinews of war had been provided. Mr. SIMON justly remarks, in effect, that, with this meagre quantity of facts before him, it is impossible to arrive at any correct result as to the influence of the Public Health Act upon the sanitary progress of the country. And such a result cannot possibly be arrived at by Mr. SIMON's successor until the central staff is considerably increased, and its members as well as its chief brought into direct and frequent communication with the district medical officers of health throughout the country.

The two inquiries now in progress, relating severally to scarlatina and to the effluvium nuisances that arise in connexion with various branches of industry, are very good examples of the sort of skilled work performed by the officers of the department, the importance of which, in its practical bearings on public health, cannot be exaggerated. The valuable experiences gleaned during the last eight or ten years as to the propagation of cholera, enteric fever, and diphtheria, show how much we have yet to learn about the causation of disease, and show, too, from the practical results already attained, how essential it is that an exhaustive study of causes should be applied to every disease that assumes at any time an epidemic character. The fourth division of work referred to by Mr. SIMON—namely, the progress of foreign epidemics — must always occupy a very prominent place in the skilled labour of the Department, because its practical outcome should be the prevention of imported disease. And here becomes apparent the necessity for enlarging and perfecting port sanitary work at all vulnerable places, so that when a warning note is sounded from the central department, London and the outports may have their preventive machinery ready, and lose no time in its application.

It is no insult to the present Medical Officer of the Local Government Board to say that he may well and worthily take up the threads as found in this Report, and follow them precisely in the way pointed out by Mr. SIMON; for that able teacher of public health has, in retiring from office, shown most clearly, and in that terse way peculiar to himself, the several directions that work should take in the medical officer's department. These directions indicate a vast amount of skilled and constant labour; but if the changes that we have hinted at above are made, we do not despair of seeing the system of local inquiries extended and consolidated, so as to equal in its results the vaccination work, and of finding the list of our preventable diseases, whether propagated within or introduced from without the community, decreasing year by year.

How do we meet the allegation that the non-restraint and liberty system adopted in this country is fraught with peril to patients and those around them? By a direct contradictory. It is needless, and we presume useless, to quote the dicta of Dr. CONOLLY on this subject. They are explicit and well known to alienists across the Atlantic, and, seeing they are not already influenced by the reiterated assertions of our principal writer, it is doubtless vain to hope that anything we can urge will convince them. We might appeal to the experience of our most successful asylums to prove that not only are restraints unnecessary for safety, they are provocative of the very excitement they profess to cure. We join issue, and deny the assertion that the casualties occurring in English asylums are the consequences of liberty. They are distinctly divisible into two classes — those which are the results of neglect of proper supervision, and those in which lunatics of the uncertain class, principally epileptics, are the aggressors. As to the first, the number is very small. Now and again, in the course of years, a case occurs in which some attendant either fails in his duty or trusts too implicitly to the rules and appliances provided, as we think, sometimes too lavishly, to spare trouble and relieve the tension of care. Such efforts to lessen responsibility commonly issue in neglect of proper vigilance. A task that is only half done can scarcely be done well. These cases are, however, far from being numerous. We doubt whether a dozen such could be found in the last twelve years, and when discovered they are severely visited. No fair disputants can attribute such

occurrences to the system; they are distinctly and exclusively chargeable to the officials by whom it is worked. The corresponding imputation, if we were disposed to take refuge in a *tu quoque*, would be, that casualties of the same kind happening in America ought to be ascribed to the neglect of attendants in applying instruments of coercion—a charge we are not in the least degree inclined to fling back at American superintendents. The other class of so-called "accidents" occur in cases where we are assured the alienists of the United States would no more employ restraint than ourselves. This is a question of fact, and we are content that it should be determined by our opponents. Do they, or would they, consent to keep their epileptics and general paralytics in strait-waistcoats or coercion-chairs continually on the chance of a sudden outbreak? There could be no difference of opinion as to such a policy. The practice on both sides of the Atlantic is the same. Cases of this treacherous character are carefully watched, and, if our attendants are occasionally careless, we believe it will be conceded that officials of the same rank elsewhere are equally fallible.

All this, however, is mere skirmishing; the contention is not as to casualties *properly so called*. These can only be minimised by constant care, whether the system employed be one of reasonable liberty or rigorous coercion. It is as to the principle of the method of treatment issue must be joined. The system for which we claim superiority is not mitigated restraint, or "manual detention," or a discipline of drugs, but pure moral influence substituted for physical force of any kind, however administered. We will make this claim for English superintendents of public asylums in face of the world, that they do not resort to underhand expedients. If they do not approve an exclusive reliance upon moral influence, they have recourse to other measures of safety openly. We decline to discuss the insinuation that the non-restraint system as employed in English asylums is not what it professes to be. If this great public question is to be argued, the controversy must be fair, and each disputant should give his opponents credit for honesty. American advocates of restraint are obviously in earnest—they have the courage of their convictions, possibly even some superfluous composure in the presence of consequences which might be expected to convince them of their error. We acknowledge their sincerity, and upon this basis we are ready that the controversy should proceed; but we claim an equal recognition of honesty on the part of the opponents of restraint, and unless this is conceded, it is impossible the issue should be fairly raised.

The essence of the system of non-restraint is personal vigilance; if this fails, the result is almost sure to be disastrous. We do not regard madness as a less formidable evil or the insane as less dangerous than they are held by those who employ restraints. Nevertheless, we say it is not necessary, nor is it useful, to resort to mechanical coercion. Force opposed by force is not controlled, it is exhausted. The morbid effort is still made, it is even increased, it gains strength by opposition, but the restraint prevents the purpose from being accomplished. We allege that the additional excitement occasioned by the antagonism injures the patient. We go further, and assert that it does not attain its object. Pent-up rage begets vengeance; a new element is introduced into the case. Emotional or impulsive maniacal disturbance is bad enough, but dogged plotting madness is worse. The mania that plans and methodises mischief is fraught with greater peril to patients and those around them than any mere impulse of violence, however insane. Psychologists will be agreed on this point. It is our contention that this greater evil is the direct and inevitable fruit of coercion. The patient who, having been restrained, is emancipated from his thraldom, rapidly loses his ferocity and vindictiveness, and becomes civilised. The experience of medical men in charge of the insane will bear out this assertion. The proof commenced in the experience of PINEL; a long succession of experiments has completed the demonstration. It is inexplicable that the alienists of America, a country so famous for its progress, should be the last to learn the great philosophic truth that the cure and the control of mind diseased must be alike mental.

When we are told that our patients and attendants are imperilled by the non-use of restraints, it is difficult to understand the position of those who are betrayed into making an assertion so startling and so manifestly groundless. Neither fact nor inference supports the charge. Accidents are not comparably as numerous in asylums where the non-restraint system is adopted as in those discredited by the use of restraints. No one comparing the list of casualties occurring thirty years ago with those of to-day can fail to be truck with the improvement. As the abstinence from mechanical coercion, and the disuse of that lingering relic of the restraint system—*seclusion*—are confirmed by experience the condition of asylums is found to improve, and cases of maniacal excitement are less difficult to control. This is precisely what Dr. CONOLLY predicted would happen. His own experience attested the truth of the forecast; the testimony of subsequent observers abundantly strengthens the conviction that this master of practical mental therapy was right. Before those who call in question the entire success of the system Dr. CHARLESWORTH introduced, and Dr. CONOLLY established, in England, can hope to impart their misgivings to those in actual charge of the insane on this side of the water, they must contrive to shake our faith in the evidence of our senses. We see the insane protected and subdued by the mildest of moral influences. We know by daily observation that they are effectually and easily cared for and cured by humane and suasive measures of watchfulness. This is not the experience of a few superintendents, but of the great majority; and those who develop the system in its purity, and carry it to the farthest legitimate issues, reap the greatest and most permanent advantages. The facts are so simple that they neither admit of doubt nor call for corroborative testimony.

Let any sceptic test the truth of our assertion, by inquiry in our own institutions, or by a fair and full experiment elsewhere. That some experiments have failed we are aware. The great experiment made by Dr. CONOLLY at Hanwell, just thirty-seven years ago, would have failed but for the faith and devotion of the man who made it. In his ever-memorable words, "The great and only substitute for restraint is invariable kindness. This feeling must animate

every person employed, and every duty to be performed. *Constant superintendence and care, constant forbearance and command of temper, and a never-failing attention to the comfort of the patients*—to their clothing, their food, their personal cleanliness, their occupations, their recreations; these are but so many different ways in which such kindness shows itself, and these will be found to produce results beyond the general expectation of those who persevere in their application. *Negligence on the part of the officers, and severity on the part of the attendants*, will bring even the non-restraint system into disrepute, and create difficulties and evils and dangers, against which bonds of leather and iron may, with apparent reasonableness, be represented as indispensable means of protection." In these suggestive sentences American superintendents who are sincere will discover the key to such failures as have occurred, and learn how disappointment may be averted. It is useless to abolish restraints if there is nothing to substitute. Such counsel would argue ignorance or disregard of the treacherous nature of mental disease. We urge no such folly as that of letting mad people revel in their delusions with unconstrained impulses. What we do ask is that the rational method of treating delusions and impulses directly, instead of employing mechanical restraints to oppose more muscular effects, should be adopted, because it is humane and successful.

THE debate that occurred on the 19th inst. in the House of Commons on the second reading of Sir HARCOURT JOHNSTONE'S Bill for the Repeal of the Contagious Diseases Acts was, comparatively speaking, brief, but satisfactory in its results. The old arguments were made use of by the mover, who described the Acts as "fatal alike to national life and national liberty." Mr. EUSTACE SMITH suggested the appointment of a Select Committee to inquire once more into the operation of the Acts. Mr. STANSFELD made his annual oration, in which he was joined by Mr. MUNDELLA, who (less accurate than usual) asserted that "the Acts had proved inoperative." The First Lord of the Admiralty, however, came to the front, and spoke for the first time on this subject. He showed that the health of the Navy "had very materially benefited by the operation of the Acts which it was proposed to repeal. In many cases the object of the Acts had been completely attained, and in all it had been carried into effect to a large extent." After quoting from the statistics of the Registrar-General, and putting before the House the direct objects of the regulations in force, Mr. HUNT concluded by declining Mr. EUSTACE SMITH'S amendment, and the Bill was eventually rejected by a majority of 122 votes in a House of 326 members.

We are at a loss to comprehend the position of those who object to the Contagious Diseases Acts. It is futile and absurd to talk about the liberty of the subject, for the liberty of the subject is assailed in a similar way by the Public Health Act and several other enactments, all very properly circumscribing the right of any man or woman to carry out ideas and perform acts dangerous to the health of the general community. Why should the State in this particular case pay for a large amount of invaliding both in the Army and the Navy when a palpable plan exists for its avoidance? We would recommend the opponents of the Acts to visit the general as well as the Lock hospitals, and there see for themselves the horrible state to which their views, carried out practically, condemn thousands of men and women. The opponents of the Acts, we must believe, are entirely ignorant of the actual aspects of the question; and hence we counsel our legislators to employ the vacation in gleaning some trustworthy knowledge of a subject, the scientific bearings of which, if sought for, can be very clearly and accurately defined.

Annotations.

"Ne quid nimis."

HEAT, AND ITS INFLUENCE ON MORTALITY AT DIFFERENT AGES.

THE weekly returns of the Registrar-General showed that the unseasonably moderate temperature which prevailed during June was very favourable to the public health. In London, for instance, the annual death-rate during the five weeks ending 1st July averaged only 19·1 per thousand, whereas, under the influence of the seasonably hot weather which prevailed during the first three weeks of July, the death-rate successively rose to 19·8, 22·1, and 28·1 respectively. Thus, in the third week of July the mortality exceeded by forty-seven per cent. the average mortality in the five weeks of moderate temperature; in other words, six hundred more deaths were registered in the third week of hot weather than the average number in the five weeks ending July 1st. There need be no hesitation in attributing this excessive mortality almost exclusively to the intense heat which prevailed during the first three weeks of July. If we exclude the deaths from diarrhœa, which are especially sensitive to temperature, the fatal cases of other zymotic diseases were remarkably stationary throughout the eight weeks under notice. It will be interesting, therefore, to note the effect of heat upon the deaths recorded in the different groups of ages adopted by the Registrar-General in his weekly returns.

It may be first noted that the deaths of persons aged under twenty years registered in London, in the five weeks ending 1st July, averaged 613, whereas they had increased to 1215 in the third week of July. This increase was equal to ninety-eight per cent. On the other hand, the deaths of persons aged upwards of twenty years averaged 665 in the five cool weeks, and were 663 in the third week of hot weather. The heat does not appear to have unfavourably affected the mortality of adults or elderly persons in the aggregate; the mortality between the ages of twenty and forty years, indeed, showed a decline of thirteen per cent., while that of persons aged upwards of forty years had only increased five per cent. Having ascertained that the whole of the increase of deaths due to heat occurred under twenty years of age, it will be useful to notice the excess in the sub-divisions of this vicenniad, which, in the Registrar-General's weekly returns, are three. Among young persons aged between five and twenty years the increase due to heat was eighteen per cent.; among children aged between one year and five it was twenty-three per cent.; while among infants under one year of age the increase was so great as 185 per cent. The deaths of infants under one year of age, which had averaged but 288 during the five cool weeks ending 1st July, rose to 822 in the week ending 22nd July. Of the 600 deaths in the latter week which may be called the excess due to heat, no less than 534 were of infants under one year of age. Diarrhœa was the direct cause of most of these deaths of infants, as the deaths from

this disease, under one year of age, which had averaged but sixteen in the five cool weeks, increased to 386 in the week ending the 22nd inst. The increase of deaths of infants from other diseases due to heat was, however, well marked, and was equal to 60 per cent. Seasonable weather, whether it be cold in winter or heat in summer, inevitably raises the death-rate. Its effect upon the mortality at different groups of ages is not, however, the same. Cold in winter is most fatal to elderly persons, and to adults who are more especially exposed to its influence. Intense summer heat, however, is only fatal to infants and in a less degree to children, while it exercises but slight effect upon the mortality of adults or elderly persons. The fatal effect of heat upon the death-rate of infants is, however, in great measure the natural result of ignorance and neglect of parents, who sacrifice their children to uncleanliness, improper and unwholesome food, and carelessness as to the prompt treatment of diarrhœa. There is scarcely any form of mortality which can with greater justice be described as preventable than that due to infantile summer diarrhœa. This annual epidemic is a sad commentary upon the intelligence and social condition of our working classes.

MESMERISM REVIVED.

WE hope there is some mistake in the terms of a notice recently appearing in one of the newspapers to the effect that a posthumous work on the subject of mesmerism or spiritualism, by Miss Martineau, is about to be published. It is humiliating to reflect that there are still believers in this folly in 1876. There is a not uncommon form of visual derangement coming on suddenly, and lasting a few hours, more or less, in which the person affected sees only half of any and every object before him. He takes up a book, and half the page, generally the right side, cut off perpendicularly, is gone. He concentrates his gaze upon a word, and the end disappears. He goes into the street and finds himself in a world which Dean Swift would have described with enthusiasm, wherein friends and enemies, horses and vehicles, in short all things, are split from top to base line, and are still seen to perform the actions and movements of life with unimpaired propriety. The effect is exceedingly grotesque, and, but that it is not agreeable, would be amusing. If anyone were seriously to allege that the phenomena witnessed in this condition were real, the assertion would be set down either to deliberate imposture or delusion. Thirty-eight years ago Mr. Wakley exposed a notorious case of practised deception, in which Elizabeth and Jane O'Key pretended to be affected with marvellous tetanic spasms on drinking mesmerised water, picking up mesmerised sovereigns, and so forth. The imposture was clearly proved. This case illustrated a class which has since been extended, and cast in a more delicately deceptive mould, by the pretenders to spiritualism, who to the craze of the weak-minded dupe add the cunning of the unscrupulous adventurer. It is not with persons of this order we are at present concerned. There are intelligent, but narrow intellects, who seem to be perpetually suffering from a condition of mental vision like that we have just described as occasionally occurring during optical disturbance. Only half the truth is seen, and impulsively credulous people persist in asserting that it is the whole. It is probably useless to attempt the correction of this error. A latent belief that nothing is impossible paves the way for every vagary of misconception, and destroys the appeal to reason. It is vain to assure the believers in mesmerism and spiritualism, or the last new "ism" of any kind, that such things cannot be. They take refuge in the story of Galileo being thrown into prison because he denied the mobility of the sun, recount the wrongs of those who first broached the ideas of steam-engine and telegraph, and smile contemptuously on the argument. Nevertheless, it is a fact that the whole superstructures of mesmerism and spiritualism have been raised on a basis of false inference and imperfectly recognised truth. It is clearly possible to weary the central consciousness through the special functions of sense. By operating upon sight, hearing, surface-feeling, and probably smell and taste, the brain may be thrown into a condition resembling sleep, in which there will be quietness without entire loss of consciousness, a disordered state like a waking-dream, or the more complex but equally comprehensible condition in which, while the combining power of intelligent thought and volition is dormant, the faculties of perception, ideation, and even purposed action, retain their energy. Every student of mental phenomena is familiar with these facts, and no stupendous sum of knowledge or amount of acumen is needed to explain them. We believe they are abundantly sufficient and competent to unriddle the mystery upon which Mesmer stumbled, and by which his bewildered followers have been misled. The half truths have been accepted and treated as the whole. It would be as reasonable to assert that hansom cabs run about on a single wheel, drawn by horses split vertically from top-lock to hoof, and human creatures exist with only one eye, half a mouth, walking gracefully on a solitary leg, as to declare that the phenomena known as mesmeric, magnetic, or spiritualistic have a veritable independent existence. If people would only require more evidence for the theories they accept, and decline to be duped by ignorant impostors, not unfrequently themselves the victims of whole or partial delusions, there would be less error in the world, and fewer bees in bonnets covering respectable crania, enclosing excellent though somewhat weak brains.

AN ABORTIVE ACTION FOR MALPRACTICE.

THE case of Richard Brown v. John Alexander Cooksey, tried at the Worcester Assizes before Mr. Justice Grove and a special jury, is one of interest to the profession. The plaintiff brought an action against Mr. John Alexander Cooksey, surgeon, and claimed damages to the extent of £150, for alleged careless and unskilful treatment of his late wife. The case of Mrs. Brown was one of stricture of the rectum—we gather, a simple, non-cancerous stricture. For this she was treated by dilatation in the Malvern Rural Hospital by Mr. Cooksey. Mr. Cooksey had used bougies almost daily between February 21st and March 16th, and, it was admitted, with very good effect. On March 16th, either during or before the operation, it was alleged that the patient objected to the operation as painful, even screaming, and that, instead of desisting, Mr. Cooksey continued to introduce the instrument. Symptoms of peritonitis set in severely, and the patient died in less than twenty-four hours. At the post-mortem examination fæcal matter was found in the pelvis, with slight peritonitis. "The stricture was nearly cured, and might have been cured with ease." This is the language of Mr. Thomas William Walsh, of Worcester, who made the post-mortem on behalf of the Committee of the Rural Hospital. Mr. Cooksey's evidence was simple and intelligible. He had said, in answer to the patient's objections, that the operation would not pain her more than the previous ones. But, unluckily, in introducing the instrument, she became suddenly hysterical, and gave a violent lurch, which, no doubt, led to the injury to the rectum which led to fatal peritonitis. Though, in the light of this accident, it is easy to see that Mr. Cooksey would have done well to have desisted on that particular day in deference to the nervous condition of the patient, it is quite intelligible that he considered himself

doing the best thing for the patient in persevering with the treatment which had been hitherto so successful. His evidence had a powerful effect on the jury. Though many eminent surgeons were in waiting to give evidence in his favour, the foreman of the jury intimated that they did not care to hear them, but were ready with a verdict. Counsel having agreed to take the verdict at once, the foreman said it was for the defendant, and the jury wished him to add that he left the court without a stain on his character. We heartily congratulate Mr. Cooksey on the prompt and appreciative verdict of the jury. The accident is of a kind to which we are all liable in various operations. And the person next to the patient and her friends to be sympathised with is the surgeon whose skill is thus baulked just when it is on the point of bringing him credit and satisfaction. We are all liable to such mischances, but it is not always that we meet with a reasonable and appreciative jury as in this case.

HOUSE-DRAINS.

A DEPUTATION from the Society of Arts introduced a memorial on the subject of house-drainage, on the 21st inst., to the notice of the Metropolitan Board of Works. The memorial pointed out that, although considerable powers have been conferred on local authorities with regard to the enforcing the proper construction and due maintenance of all house-drains, pipes, and connexions, yet in practice such powers are not sufficiently carried out at the present time, and require to be amended and enlarged. The memorialists therefore urge that an amending Act of Parliament be passed as soon as possible to secure that all house-drains connected with public sewers in the metropolis, and towns having an urban authority, should be placed under the inspection and control of local sanitary authorities. Sir Henry Cole pointed out that, with respect to houses built before the Metropolis Management Act of 1855, it had been found that the powers conferred by that Act were in operation, and that the vestries could not intervene. Sir Henry instanced the case of some houses in Kensington which were never free from typhoid and scarlet fever. The question is a very important one, and we think that many householders of Marylebone, St. Pancras, and other old London parishes would be very much astonished, if an inquiry were made into the condition of their house-drains, to find over what pestilential sewers they had been living. We believe there is no exaggeration in saying that the house-drainage of nearly two-thirds of the houses in the older London parishes is defective. The drains, originally constructed of brick, through age and the undermining activity of the rats have become extensively pervious, and the domestic sewage passes out freely into the basements, and but a small proportion reaches the sewers. There can be no doubt that such elongated cesspits ought at once to be swept away, and earthenware pipe-drains substituted. We would suggest, in addition to the proposal to submit the plans of house-drains and connexions to the local authorities, that power should be given for the authorities to appoint an inspector to see that all such sanitary work was properly carried out. A case which came under our notice the other day shows the necessity of such an officer. A gentleman took a large house in a fashionable street, which was stated to be well drained, as the previous tenant had removed the old house-drains and laid down pipe-drains. Notwithstanding, a disagreeable smell was constantly experienced in the house. In vain were the waterclosets ventilated, and the stable drainage, which was suspected, isolated by the introduction of concrete walls; still the smell remained. At last a spot of suspicious dampness over one of the flags of the basement offices attracted attention, and it was then found that the workmen who had laid down the pipe-drainage had been content simply to lay the pipes in juxtaposition without cementing them together; consequently the house-sewage was finding its way freely out under the basement offices. Had it been compulsory on the contractor to have had his work passed by an official surveyor before it was covered over, such a piece of "scamping" would have been detected, and much annoyance, expense, and probably ill-health, prevented.

ROYAL WARRANT FOR MEDICAL OFFICERS OF THE MILITIA.

THE new Royal Warrant is dated the 12th inst. It is too lengthy a document for insertion in its entirety in our columns, but its salient points are as follows:—A departmental list is to be formed of such militia medical officers as shall elect to serve under the direct supervision of the Director-General of the Army Medical Department. These medical officers will be required to perform army medical duties only during the embodiment of their regiment, or during training, or when present during preliminary drill or recruit drill, or when ordered by competent authority. Militia medical officers are to have a rank corresponding, but junior, to army medical officers of the same length of service. Their rates of pay during embodiment, preliminary drill, or training are £1 and 13s. 8d. per diem for a surgeon-major and surgeon respectively, their quarters and allowances being regulated by their relative rank. Medical officers in receipt of full pay and allowances are liable to be called upon to examine recruits for the regular forces without any additional remuneration. No claim to allowances for medicines will be granted where there is a military hospital available for their supply. Militia medical officers are prohibited from claiming any pension or retiring allowance under the present Warrant, and those who do not, before the 31st of December next, signify their wish to be placed on a departmental list, will not be entitled to any of the advantages specified in it. By the concluding clause it is directed that no further first appointments of medical officers to the militia shall be made, but the medical duties of that portion of the force are to be henceforth performed under the orders of the Director-General of the Army Medical Department.

By this it will be seen that the militia medical service, as a service, is practically abolished; and the Secretary of State's instructions for interpreting the Warrant indicate this more plainly, for militia recruits will be examined by an army medical officer whenever available, at or near the place of enlistment, and such recruits, when trained at a brigade depôt, or at any station, are to be under the medical charge of an army medical officer, and the militia permanent staff, with their families, are also to be attended by army medical officers when the head-quarters are at a brigade depôt. It is manifest that under the foregoing circumstances, the appointment of a militia medical officer will be relatively valueless when shorn of its chief pecuniary advantages.

DEGENERATION OF NERVES.

AN essay on the degeneration of the nerves when separated from their trophic centres appears in a late number of the *Archives de Physiologie* (No. 5, 1875), by MM. A. Cossy and J. Dejerine. These experimenters have employed the sciatic nerve of guinea-pigs as the subject of their observations, the nerve being examined daily up to the nineteenth day after its section. They corroborate the statements of Longet, to the effect that the excitability of the peripheric segment is greatly lowered on the second day after the operation, and after the third day is almost

entirely lost. They also corroborate the statements of Ranvier in regard to the structure of the nerve, except that they have never been able to satisfy themselves of the presence of a protoplasmic layer between the medullary layer and the sheath of Schwann. MM. Cossy and Dejerine find that the degenerative processes in the peripheric portion of the divided sciatic take place with much greater rapidity in the fine primitive fibres than in those of larger calibre, which form the great majority in this and other mixed nerves. After the lapse of three days, at a time therefore when the physiological degeneration is already completely expressed, no other changes can be demonstrated than that the axis-cylinder is abnormally friable, and that the nuclei of the sheath of Schwann are very slightly swollen. There is certainly not at this time the great swelling and enlargement of these nuclei to which Ranvier is inclined to attribute the suppression of the physiological excitability of the nerve. The swelling of the nuclei noticed by Ranvier commences after the fifth day with the well-known changes in the medullary sheath. About the twelfth day the axis-cylinder has entirely vanished in all the fibres. From these observations the authors conclude that in the degeneration of nerves divided from their centres, the axis-cylinders are first affected, becoming fragile and losing their continuity. The enlargement of the nuclei and the changes in the medullary sheath they regard as only of a secondary nature, and are not the cause of the loss of functional activity of the fibres. The authors are therefore inclined to attribute, with Waller, a positive nourishing and maintaining power to the trophic nerve-centres, and not, as Claude Bernard and Ranvier believe, an inhibitory influence.

MURRAIN.

A SERIOUS outbreak of murrain in the Government of St. Petersburg has given rise to much uneasiness there, and the rural Administration of the province has thought it desirable to publish an instructional minute on the subject. This minute points out that, in view of proper precautions being taken, it is very necessary that the public should distinguish between *bovine plague* ("rinderpest," "steppe murrain," "cattle plague,") and *Siberian plague* (the "Siberian ulcer," malignant pustule). Bovine plague, the "cattle-plague" of our phraseology, is imported from the south-eastern provinces of the empire, and is only known in the northern provinces as a result of importation. Its symptoms are those of a contagious abdominal typhus, the digestive organs of the animals attacked being principally affected. The disease is propagated solely by contagion, direct or indirect, the mere handling of a healthy animal by one who has previously handled a sick one, being sufficient to communicate the malady. The state of the temperature, climatic and topographic conditions, manner of feeding and of stalling, exercise no influence upon the dissemination of this epizootic.

The Siberian plague prevails chiefly in the marshy districts of the north. The hot seasons, unwholesome emanations from the soil, the miasms produced by putrefying organic matters, facilitate its propagation, and the careless tending of the animals predisposes to contagion. The disease shows itself first by a considerable swelling, which ulcerates, the subsequent course of the malady being very similar to that of malignant pustule. The Siberian plague attacks every animal without distinction. Man even does not escape from it if the virus comes into contact with a wound.

In the southern provinces of Russia bovine plague has been treated with success, but in the northern provinces recovery is so rare that the disease should be considered there incurable. The Siberian ulcer, on the other hand, the minute states, admits of almost certain cure if treatment be adopted immediately after the discovery of the malady. The epizootic which has broken out in St. Petersburg is the bovine plague, introduced there by infected herds coming from Novgorod. Strict measures have been taken for the disinfection of cattle-trucks and barges on the infected line of transit, and cattle proprietors are advised to exclude all strange cattle from their sheds, and to prevent them approaching their pasturages; also to keep dogs (often the means of conveying the contagion) under restraint. It is advised also that no purchases of cattle should be made unless the purchaser can assure himself that they do not come from an infected district. The recommendations seem to us to be wanting in vigour, and they will hardly succeed in arresting a severe outbreak of cattle plague. The poleaxe is the essential means for preventing the spread of this disorder, as we had to learn at a great price after the introduction of the epizootic into this country in 1865.

MODE OF ELECTION OF RESIDENT MEDICAL OFFICERS OF HOSPITALS.

OUR advertising columns contain very satisfactory illustrations of the fact that a great improvement is taking place in the mode of electing house-surgeons or house-physicians to hospitals. In last week's LANCET there was an advertisement intimating that shortly a house-surgeon will be appointed to the Newcastle Infirmary. On the score of qualification, it is properly required only that he be registered in medicine and surgery. This way of stating the qualifications necessary recognises no territorial distinctions of qualification. So that a good candidate will not be at a disadvantage because he has taken his qualification in one part of the kingdom and not in another. This implies a liberal alteration of an old rule, which required the diploma of particular bodies. But the more special object of our present remarks is to express our hearty approval of the change by which the election is made by the House Committee, instead of by the general body of governors. Moreover, the House Committee is to select from candidates approved by the medical officers. The ordeal of canvassing the governors of an institution like that of the Newcastle Infirmary is one from which a sensitive man who has no spare cash, whatever his personal qualifications, naturally shrinks. The result generally was, that the man with the longest purse and the greatest number of friends got the appointment, and very often the more deserving man was left out in the cold, *minus* a sum that he could ill afford to lose. It is infinitely better to save candidates the annoyance and the expense of such a process, as in Newcastle. It is further satisfactory that the House Committee is to choose from candidates approved by the Medical Board. The medical staff have to work with the resident officer. He has the power of greatly affecting the results of the treatment of the medical officers, by the diligence with which he sees it fairly carried out. They are clearly best able to judge of the moral and professional qualifications of candidates, and their approval of candidates is wisely required.

These principles are also recognised in the case of the Wolverhampton and Staffordshire General Hospital. In the advertisement of this vacancy it is said that, "as the most eligible candidate will be elected, anyone canvassing will be disqualified." These two clauses are not perhaps logically related, but they imply that canvassing will be prohibited and the election determined by merit. Testimonials are to be addressed to the "Chairman of the Medical Committee."

We hope soon to see all appointments of this kind filled

up in a similar manner; and we do not doubt that the results will justify the change. The reasons for making such a change are so strong as to justify special meetings of governors to make the necessary alterations in the rule.

MISTAKES IN ANALYSES.

WE must confess to a feeling of great disappointment at the discrepancies between the results of analyses made by professed analytical chemists which are constantly transpiring. The effect on the public of conflicting testimony from experts, regarding the quality of a given article, must be utterly subversive of the respect which should be entertained for those appointed to carry out the provisions of the Adulteration Act. A grave mistake was recently brought to light at the Lambeth Police-court. A tradesman was summoned there for selling arrowroot in an adulterated condition. It appeared from the evidence that on June 14th the inspector purchased some of the article at the defendant's shop, and that he divided it into three parts, one of which he took to Dr. Bernays, the analyst for the district. Dr. Bernays gave a certificate that the arrowroot was almost entirely composed of potato-starch. The defendant, however, declared that he had purchased the arrowroot of a firm in the City, and sold it just as he had received it, and evidence was given in support of this statement. The magistrate then directed that a portion of the arrowroot should be forwarded to the principal of the laboratory of the Inland Revenue for examination. At the adjourned hearing Dr. Bernays stated that he had again examined the sample "and had found that it was arrowroot, and he very much regretted the mistake." The vestry clerk also expressed his regret that the proceedings had been taken. The magistrate said he had received a letter from the Inland Revenue Board stating that the sample of arrowroot received was genuine. The summons would therefore be dismissed with costs, to be paid by the vestry to the defendant.

LOCAL SELF-GOVERNMENT AT LIVERPOOL.

THE Corporation of Liverpool, after an animated and somewhat acrimonious discussion on the 19th inst., have elected as their deputy medical officer of health a gentleman from their own ranks. The post, which, as we stated a fortnight ago, is one of the most responsible in the kingdom, was not advertised, and it appears that its creation was not even announced until, as the result proved, the officer was, in effect, chosen. The precedent thus set by the local authority of a leading town is most unfortunate, and, indeed, is bad in every way. Dr. Taylor may or may not possess special qualifications for the office which has been conferred upon him, but his own position and that of the corporation would have been far stronger and more dignified if the appointment had been advertised in the usual way, and a real election had taken place. We do not care to canvass the pleas put forward by certain members against the course adopted, for most of them were utterly beside the question at issue. Specified degrees or diplomas of course indicate generally the quality of the candidate, though they do not always indicate the proper man for any particular position. But it was perfectly well known in our profession that, if the post had been advertised, it would have attracted a large number of good men. For Liverpool is second only in importance to the City and Port of London districts, which are administered by the Corporation, and to each of which (as we think very properly) a health officer is attached. But in this case urban and port districts are combined, the former being one of the four largest urban sanitary areas in England, and the latter, next to London, by far the most important in every respect, and specially as regards the importation of epidemic disease from abroad. We believe also that port sanitary work requires special qualifications, and that a man cannot, so to speak, "jump into" a knowledge of details respecting the construction and internal arrangements of either large or small vessels. The authorities at Liverpool might, after all (and perhaps not unwisely), have elected the present holder of the office; but they committed a grievous error in not proceeding to an orthodox election and selection; so that the meeting of the 19th, as far as the choice of a health officer is concerned, cannot but be looked upon as a sort of "hole-and-corner" piece of business.

Since the above remarks were written we have received a copy of the following memorial to the Local Government Board, which has already been signed by upwards of one hundred medical practitioners at Liverpool:—

"To the President of the Local Government Board.

"We, the undersigned medical practitioners in Liverpool, feeling deeply the importance of securing for the town the services of the most highly-qualified man as medical officer of health for this borough, beg to draw the attention of the Local Government Board to the manner in which the recent appointment of deputy medical officer of health has been made by the Town Council.

"We consider the action of the Town Council objectionable on the following grounds:—

"1. The appointment appears to have been determined by private considerations rather than with a due regard to the public interest.

"2. The usual means of securing the services of the most highly-qualified person for the office have been departed from, the Town Council having selected one of their own number, without advertising or giving other candidates the opportunity of applying.

"We hope the Local Government Board will refuse to sanction an appointment made in a way so completely at variance with public interests."

HOTEL WINES.

COMPLAINTS frequently appear in the public papers with respect to the high prices charged for, and the inferior quality of, the wines supplied at hotels. Hitherto remonstrances have fallen on deaf ears, and the "wine card" of the English hostelrie still calls for reform. We are aware that the expenses attendant on hotel management are great, and that every article must be taxed in order not only to yield a fair profit, but also to cover possible losses from fluctuations in business. Still, one hundred per cent. is out of all reason; yet this and even considerably more is made by most hotel-keepers out of their cellar. Take the sherry, for instance: we will venture to contrast any ordinary dinner sherry at 36*s.* a dozen, bought at a respectable wine merchant's, against the wine furnished at most hotels for 6*s.* a bottle; and, what is more, we predict that, in the opinion of judges, the former would be considered immeasurably the superior. The same may be said of the clarets and hocks, and perhaps of the ports, though we confess to not having the courage to make the experiment on our own stomach. Hotel-cellars seem also to have a deteriorating effect on champagnes; for the wines even of the best brands are very different from those of the same brands procured through our wine merchant. So strongly have we been impressed by this fact, that we have been led to suspect that there is a distinct class of champagne set aside by growers for the hotel trade. Indeed, the same suspicion has attached itself, in our mind, to other wines; for we have often been struck with the strong family likeness subsisting between the sherry of one hotel and the sherry

of another. The inferiority of hotel wines, however, is now so generally recognised that we are not surprised to learn that many of the travelling public are beginning to protect themselves by taking with them a well-filled flask of brandy or whisky, on which, with the aid of a little soda or seltzer water, they can fall back when they find their host's wine too much for them. That this practice is a growing one we are well assured, and we have recently met with several gentlemen who have carried it into effect. It is, however, a disagreeable necessity, and we hope, ere long, hotel-keepers will see the error of their ways, and give their customers at least sound wholesome wine in exchange for a fair value received. Why cannot hotel-keepers adopt the club practice of requesting, say, half-a-dozen first-class wine merchants, whose names would be a guarantee as to quality, to supply their wine card? In this way the public would have a wider selection to choose from, the wine merchant would be anxious to supply a good article for the sake of the patronage it would bring him, and the hotel-keeper would be relieved of an immense responsibility, whilst no one would grudge him, say, a corkage of half-a-crown a bottle, and eighteenpence a pint on high-class wines, and somewhat less on the ordinary varieties, so that he could still look for considerable remuneration from this department of his business.

THE POPE'S SECRET SURGEON.

THE death of Dr. Vincenzo Sartori, lately noticed in THE LANCET, left vacant the post of "secret surgeon" to the Pope, and that has just been filled up by the appointment of Dr. Ceccarelli, who has for some years acted as surgeon extraordinary. For his introduction to the Vatican Dr. Ceccarelli was indebted to Monsignor de Mérode, whose fractured leg he skilfully reduced, and who, out of gratitude, got the Pope to consult him, although His Holiness had already two competent medical advisers in Drs. Viale-Prelà and Constantini. Regretting as he does the death of Sartori, who was nearly contemporary with himself, and whose sagacious judgment he often had recourse to in other matters besides his bodily infirmities, the Pope has had good ground to be satisfied with his new "secret surgeon." His health was never better than at present. The same restorative treatment is observed. The strong capon-soup, followed by a glass of "the best of Rhenish wine" (sometimes alternating with Romanée, Conti, or Cyprus of the Commandery), sustains his strength. In the prevalent heat he avoids the gardens of the Vatican, and takes his daily walks in the spacious and equably ventilated halls of the palace itself. He visits regularly the "Gallery of the Geographical Maps," where he traces the movements of the belligerents at the seat of war, in which he takes a lively interest. He surprised his attendants the other day by mounting the stairs that lead to the gallery in question without the aid of the staff which is generally his support and invariably his companion.

A MEDICAL MAN FINED FOR OBSTRUCTING THE REMOVAL OF A SMALL-POX PATIENT.

WE regret to see, by the report of a trial before the magistrates of Bolton, that Mr. Dorrian, surgeon, was defendant in a case of obstruction to the removal of a small-pox patient, very imperfectly accommodated in a small house. The family consisted of the father and mother and seven children; the house of a kitchen, scullery, and two bed-rooms. Some of the children were at school, the others were at work. The case of small-pox was in the kitchen, which was the room in which the family lived. The parents would not allow the girl, aged twenty-one, to be removed into one of the bed-rooms. Under these circumstances the magistrates, acting under a certificate of the medical officer of health, Mr. Sergeant, gave an order for the removal of the girl to the workhouse—by the way, a very improper place for a small-pox patient. But clearly the necessity for the removal of the case of small-pox out of this house and family was urgent. The father refused, and Mr. Dorrian, described "as a respected practitioner in Bolton," encouraged the father to disobey the order. The father and Mr. Dorrian were respectively fined £1 and the costs. We do not know what Mr. Dorrian has to say in this matter; but to us it appears incapable of defence. Ignorant people may be excused for consulting only their own selfish feelings; but we expect a medical man to be influenced by public considerations. Here was a case of small-pox in a thoroughly wrong place. The law is to the effect that a case of small-pox is a public affair; that the public have a right to insist on precautions for the limitation to the utmost of this plague. The law is conceived in the spirit of reason and humanity. That a medical man should lend his sanction to its violation passes our comprehension. If the father in this case had realised that, by having a hotbed of small-pox in his kitchen, within three feet of the door, he was endangering the lives of other people and other people's children, he would probably have obeyed the law. Mr. Dorrian should have made this clear to him, instead of encouraging him in the ignorant view that his daughter's illness was a merely private question. The decision of the magistrates is to be appealed against; but there can be little doubt that it will be supported. We are threatened with another epidemic of small-pox, and the public danger calls for a strict administration of the Public Health Act.

CILIATED PUS-CELLS.

IN a communication made to the *Centralblatt* (10th June) Prof. E. Neumann, of Konigsberg, states that if a catarrhal condition of the mouth and throat of a frog be established by the application of a few drops of a weak solution of osmic acid (one quarter to one-half per cent.), the secretion of the mouth will be found to contain, in the course of from twenty-four to forty-eight hours, besides numerous slightly browned but otherwise unaltered epithelial ciliated cells, cup cells, and, besides amœboid cells presenting the usual characters of pus-cells, peculiar cells of an intermediate kind, which resemble the former in having cilia, and the latter in their contractility. The cilia do not cover the whole surface, but form a kind of crown, or are compressed into a brush. They are imbedded directly in the protoplasm without the intervention of any basal seam. The cells often rotate actively in consequence of the play of the cilia, and then preserve an approximatively round form; but as soon as the cilia cease to play they begin to perform amœboid movements.

A PLEA FOR THE POLICE.

IT was stated officially in the House of Commons some few days ago that the Metropolitan Police are to be provided with a new description of head-dress. May we not, in the interest of the force, suggest that some modification be made in other items of clothing, at all events during the summer and autumn. It needs no special medical skill to prove that the present dress, with the present temperature, must be fearfully uncomfortable and unhealthy, as well as wofully depressing. Policemen are now, in the dog-days, far worse off than soldiers. The conventionalities of society do, indeed, permit some of us to establish a white waistcoat, mount a white hat, and almost ignore gloves, and then the scorching sun above, and the glare of the pavement underfoot, are bad enough. But whether the thermometer scores

80° Fahr. or zero, there stands or parades the policeman, buttoned in blue up to the chin, and, as we may presume just now, in a fearful condition of spongy discomfort. Has not the chief medical officer at Scotland-yard something to say on the subject?

WILFUL EXPOSURE OF A CASE OF INFECTIOUS DISEASE.

A CASE of great importance to medical officers of health and their authorities, and also to the public, was decided at Bow-street Police Court on Wednesday last. It appears that on the 5th of this month Dr. Murphy, resident medical officer at the London Fever Hospital, wrote to Mr. Lovett, medical officer of health for St. Giles's district, complaining that a person living in Montague-mews, Russell-square, had removed her child from the hospital before the infectious period of scarlet fever, from which she had been suffering, had passed away, or the clothes had been disinfected. After making inquiries, Mr. Lovett reported the matter to his board, who at once ordered proceedings to be instituted against the child's parent.

The summons was heard before Mr. Vaughan, both the defendant and the St. Giles's authorities being legally represented. Dr. Murphy gave evidence that the defendant had removed her child from the hospital without his consent and against his order, whilst the peeling process was still going on. He also stated that the authorities of the London Fever Hospital were powerless to detain their patients under such circumstances, but that at the Stockwell Fever Hospital, which is under the control of the Local Government Board, there is full authority to prevent a patient's removal without an order from the medical officer. After hearing further evidence from the nurses and porter, Mr. Vaughan said the case had been clearly proved, and if the defendant had not been in humble circumstances he would have inflicted the full penalty of £5. As it was, he imposed a mitigated penalty of 20s. and costs, or fourteen days' imprisonment.

We hope due notice of this case will be taken by the lay press. The public should be taught that the health of the whole community is imperilled by rash acts such as that for which the defendant in this case was punished, and moreover that a flagrant violation of the law is perpetrated thereby.

THE "KINGSLEY."

WE have received a prospectus of an establishment which is about to be founded under medical auspices in North Devon, at Westward-ho, the place rendered famous by the genius of Charles Kingsley, and which is to be called after his name. It is to be a large institution for the reception of visitors to the seaside, designed especially to supply every requirement of invalids or convalescents, and intended, if need be, entirely to relieve those who resort to it from the cares of housekeeping. For this purpose it will be conducted somewhat on the same principle as Mr. Hankey's great house at Queen's-gate, although such residents as prefer to cater for themselves will be at liberty to do so. The "Kingsley" is to be built by a limited company, and, as a wholly new feature in such institutions, the directors will be advised by a medical council upon all points of construction and maintenance which have any bearing upon the sanitary perfection of the arrangements. This council is formed by Drs. Meadows, Broadbent, and Tilbury Fox, with Messrs. Pollock and Brudenell Carter. The extraordinary salubrity and the mild climate of Westward-ho render it an extremely suitable place for such an institution, and when we consider how much invalids have hitherto been dependent upon the ordinary lodging-housekeeper, or upon establishments devoted to hydropathy or some other form of quackery, we cannot but think that a house which will be distinctly under medical supervision should have no lack of inmates. It is part of the plan to have a resident physician, whose especial duty it will be to carry out, as far as may be possible, the wishes of the medical attendants of the patients who resort to the place. We are informed that the council will be glad to receive suggestions from medical men with regard to the wants of patients, and that all such suggestions will receive careful consideration. The offices of the company are at 18, Abingdon-street, Westminster.

PERSISTENCE OF SENSIBILITY IN DIVIDED SENSORY NERVES.

MM. ARLOING and TRIPIER have recently made some important investigations on the persistence of sensitiveness in the peripheric extremity of divided sensory nerves. They find that this sensibility may be demonstrated in carnivora, solipedes, and rodents. In all instances, and they have found it to exist in the branches of the fifth and in the nerves distributed to the limbs, the sensitiveness of the peripheric end is due to the presence of nerves, the connexion of which with the trophic and perceptive centres has not been interrupted by the section. When these nerves happen to be absent the peripheric extremity of a divided trunk is no longer sensitive. The nerve-fibres in question proceed from the fifth pair, in the case of the facial from the adjoining nerves, and from those of the *opposite side of the body* in the case of the ordinary sensory nerves, and from neighbouring and homologous nerves for the nerves of mixed function. The recurrent nerves run up to a variable height in the trunk of the nerve with which they are associated, and their number diminishes in passing from the periphery towards the centre. The loop or point of recurrence of these fibres may take place before the termination of the nerves, but usually occurs at the periphery.

LIVE TURTLE.

WE have repeatedly commented on the cruelty practised on animals during transit, and have pointed out how unfit such treatment makes them to become afterwards human food. Passing the other day through Southampton, we were surprised to see the treatment at the railway station of the live turtles brought by the West Indian packets. Exposed on the passenger platform, on their backs, lay about forty turtle; round them stood a crowd, composed mainly of boys and "gents," busily engaged in scientific experimentation—in endeavouring to excite reflex action by prodding the unhappy chelonians in parts not protected by their undershell. One experimenter found that by pulling up the reptile's eyelid, and touching the eye, he evoked vigorous spasmodic action of the fins, and was proportionately elated at his success. This was at seven o'clock in the evening. At eleven we passed through the station again, and the unhappy turtle were still there, and the experimentations going on as vigorously as ever. How long they remained thus exposed we cannot say, but it is probable they were not removed till one o'clock in the morning, when the night mail left for London. Apart from the needless cruelty, the sight was a disgusting one, the mass of yellow cadaverous-looking bodies having a ghastly effect. A susceptible person, a lady, for instance, coming suddenly upon such an object, without recognising what it was, might have received a severe shock. The directors have no right to use their passenger platforms for such exhibitions; whilst humanity suggests that the unhappy reptiles ought not to be thus exposed to the wanton cruelty of bystanders. Surely there can be no difficulty in finding accommodation for these

animals in the goods shed, whilst an occasional bucket of water poured over them would be an additional act of humanity.

SANITARY AFFAIRS IN THE CITY.

DR. SEDGWICK SAUNDERS, medical officer of health for the City, has reported the outbreak of fever in a yard out of Aldgate, opposite the slaughterhouses. Five cases had been under treatment; of these two were sent to the Homerton Fever Hospital and one died. The premises were in a fairly good sanitary state. Dr. Saunders has also called attention to the unwholesome condition of Thames-street, especially in front of the Custom House, in consequence of the accumulation of filth from the fish vans, &c. Suggestions for the removal of the nuisance were made, but further consideration of the matter was deferred. During the week ending July 15th, 23 deaths were registered in the City, while the births numbered 29. Out of 364 homes which had been inspected, 27 required sanitary improvement. The markets and slaughterhouses had also been duly inspected, and the officers had condemned over three tons of meat as unfit for human food.

THE CONJOINT SCHEME.

IT is not yet certain what will be the course of the corporations in reference to the changes in the Conjoint Scheme suggested by the University of London, the chief of which, as we have already said, are to the effect that the Universities shall take no part in electing examiners, and shall have a larger representation in the Board of Reference. Perhaps a decision on the subject may be come to before the holidays. It does not seem improbable that the Colleges and the Society of Apothecaries will agree to the proposals of the University. But he would be a hopeful man who would believe in a Conjoint Scheme till he sees it in operation.

MR. ROEBUCK, M.P., ON VIVISECTION.

MR. ROEBUCK, the senior M.P. for Sheffield, has addressed a letter to one of his constituents, which appeared in the *Sheffield Daily Telegraph* of the 20th instant. Mr. Roebuck promises to pay what attention he can to the subject. "I entirely agree, writes Mr. Roebuck, "with the deputation of the medical profession, and sympathise with their indignation at the indignity sought to be imposed on them. With indignation in my mind is joined wonder at the folly and weakness of those of the peers who support this piece of legislation."

HEALTH OF THE CAMP AT WIMBLEDON.

THE following report of the condition of the late camp at Wimbledon has been issued by Surgeon-Major Footner, M.B., who was in medical charge during the fortnight over which the meeting extended:—

"The general health of the camp has been remarkably good, the number of sick who have required treatment for more than a day amounting during the period to only 23; a percentage of sickness to strength of ·05. Although the weather was excessively hot, the temperature for several days exceeding 80 degrees in the shade, and on two consecutive days—the 16th and 17th—rising to 88 degrees, only one case of sunstroke necessitating treatment in hospital came under my notice; the volunteer who was the subject of this attack omitting to wear the usual cap cover. A soldier received a slight wound of the leg from lead splashing when marking at the running deer—an iron target; injuries from this cause were somewhat frequent before the introduction of the canvas targets. The applicants to hospital for temporary treatment for slight ailments not necessitating going on the sick-list have numbered 154, a percentage to strength of ·38, a very small average. The sanitary arrangements and condition of the camp have been excellent. The water supply generally has been abundant and of good quality."

IN the last annual report of the sanitary condition of Macclesfield, Dr. G. Bland reviews the circumstances attending the epidemic of scarlet fever which visited the town last year. The outbreak commenced among the pupils of the Hurdsfield Infant School, no less than thirteen cases having occurred at the time when Dr. Bland's attention was called to it. The managers of the school declined to accede to the request of the sanitary authority of the town to close the establishment until the epidemic abated, and it became necessary to communicate with the Education Department, Whitehall, from whence a peremptory order to close the school was issued. The severity of the outbreak in the particular district where the school is situated is shown by the fact that out of a population of 3000, 156 persons were attacked. The other districts in the town suffered but slightly in proportion. The moral which Dr. Bland points out to the town authority is to have an infectious diseases hospital always ready for the reception of initial cases of scarlet fever.

AN American contemporary, in reviewing "Medical and Surgical Memoirs," vol. i., by Dr. Joseph Jones, a well-known physician in the South, observes that the work was commenced twenty years ago, but was interrupted by the Civil War, when, at the capture of Richmond, the whole, consisting of some thousands of pages of manuscript, was destroyed. Such an accident would have damped the ardour of most men, but Dr. Jones, with an energy and assiduity truly remarkable, has reproduced the best part of his labours. The greatest portion of this first volume is devoted to the consideration of tetanus and cerebro-spinal meningitis, the rest dealing with the liver, kidneys, circulatory and lymphatic systems, bone diseases, and pneumonia, 100 pages being given to the latter affection.

AT a late meeting of the St. Pancras vestry, a member called the attention of Dr. Stevenson, the analyst, to the quality of the coloured ice now so largely sold in the streets, and asked whether it would not be desirable to analyse some of the samples hawked about. Dr. Stevenson, while promising to give some instructions in the matter, expressed a belief that the colouring matter in ices was not injurious to health. We venture, however, to think that street ices would, on examination, reveal the presence of many matters deleterious to the human system. It would be interesting to have half-a-dozen samples obtained in as many of the poorer quarters of the metropolis thoroughly analysed.

A PARLIAMENTARY Bill has been prepared and brought in by Mr. W. H. Smith, M.P., and the Chancellor of the Exchequer, to make further provision respecting the superannuation allowance to be given to Englishmen and others who have served the Government in a civil capacity in unhealthy climates. If this Bill becomes law—and we cannot conceive from what quarter opposition to it can arise—a large number of members of the profession serving abroad will be beneficially affected thereby. The determination of places to be deemed unhealthy will devolve on the Treasury.

DR. HALL, the medical officer of health for Prescot, reported, at the last fortnightly meeting of the local board, that measles prevailed epidemically in that town and in the neighbouring villages, and urged the necessity for the prompt suppression of all nuisances. The fatal prevalence of this disease would appear to have spread from St. Helens, where it has been severely epidemic for some months.

WE have to record the death of Mr. Matthew Moorhouse, M.R.C.S., L.S.A., and J.P., which occurred at Melrose, South Australia. In 1839 the deceased gentleman was appointed by Government protector of the aborigines of South Australia and arbitrator between them and the settlers, which office he held about twenty years, discharging with vigour and ability the heavy and often dangerous duties devolving on him. His constant intercourse with the natives familiarised him with their scanty dialects, and the knowledge he thus obtained was embodied in a grammar and vocabulary. On the termination of his appointment he practised his profession with signal success, doing good service also as magistrate. He died from fever contracted in the performance of a charitable and self-imposed work. Mr. Moorhouse was well known and highly esteemed throughout the colony, and his funeral was probably the largest ever witnessed there, many attending from a distance of over 100 miles.

A SOMEWHAT singular death, while undergoing an operation for cataract, under the influence of ether, is reported by an American contemporary. The surgeon had performed an iridectomy on the patient some three months previously, and had then administered ether without any alarming symptoms having been observed. On the final occasion, after eight or ten fluid ounces of ether had been consumed, violent coughing ensued, and was soon followed by an extremely livid appearance of the face, and then by cessation of breathing. Artificial respiration, which was immediately practised, soon brought the man round, and the operation was proceeded with and finished, occupying about ten minutes. It was then noticed that the patient was again sinking, and the same means of restoration were resorted to as before, but this time unsuccessfully, death resulting in a few minutes. An autopsy in this case would have been instructive, but it was not performed.

THE annual report recently issued by the Auditor-General of Barbadoes presents a most unsatisfactory picture of the sanitary, as well as of the political and moral condition of the population of that island. Over-population, leading alike to high prices and low wages, and the want of an equitable system of Poor-law relief, have reduced a large portion of the black population to such a condition of poverty that disease and absolute starvation are producing an excessive death-rate, especially among children. Sixty per cent. of the children are said to be illegitimate, which affords some explanation of the high rate of infant mortality.

THE municipality of Lisbon are reported to have resolved to adopt a system of main drainage, similar to that which has been constructed in London. A contract has been made with an English engineer to draw up plans and estimates, after which it is proposed to put up the works to public competition. Lisbon is not one of those Continental cities for which the Registrar-General publishes periodical mortality statistics.

THE annual meeting of the Model Houses Association was held on Wednesday, under the presidency of the Bishop of Gloucester and Bristol. This association, which is purely philanthropic, is formed to improve the sanitary condition of the dwellings of the poor, and the progress of the association, judging from the report, seems to be eminently satisfactory.

HIS Royal Highness the Duke of Cambridge has sent a contribution of £10 towards the fund now being raised to found and endow a Museum of Hygiene at University College in memory of the late Dr. Parkes.

OUTBREAKS of cholera are reported from various parts of India. The disease has broken out severely in the military prison at Lucknow, and the whole of the inmates are to be removed into camp. It is also causing great mortality amongst the Maharajah of Cashmere's troops at Sher Gari, and has appeared in the gaol at Srinagur, which had hitherto escaped. Some of the villages in the neighbourhood of Bombay have been rather heavily visited, one, Golwood, especially, but the disease is now abating in all.

THE Keighley Guardians are incorrigible. At a meeting held on Wednesday a Local Government Board inspector who was present warned them that the Board would not hesitate to enforce the law in the event of the guardians failing on that occasion to pass the necessary resolution for giving effect to the order of the Court. In defiance of this warning, a motion that instructions should be given to the vaccination officers to carry out the Act was again negatived by seven against three votes.

WE regret to have to announce the death of Dr. Lonsdale, Rose-hill, Cumberland. The deceased was M.D. Ed. and F.R.C.P. Ed., consulting physician to the Cumberland Infirmary, and late Lecturer on Anatomy and Physiology, Edinburgh. He was the author of Lives of Professor Goodsir of Edinburgh, of Dr. Knox the Anatomist, and of Dr. Heysham of Carlisle, and contributor of several papers to the *Edinburgh Medical Journal*. We hope to publish an obituary notice of Dr. Lonsdale.

CAPTAIN BEDFORD PIM has given notice of calling attention to the fact "that no fewer than thirty-six non-registered persons are still permitted to proceed to sea in medical charge of passengers and crews, contrary to law." This notice has reference to a Circular Order issued by the Board of Trade to its officers some six months ago, the terms of which directed that all ship-surgeons should be not only qualified, but registered medical practitioners.

AT the annual meeting for the election of officers to the College of Surgeons, the Council, in re-appointing Mr. Thomas Madden Stone, passed a resolution expressive of their appreciation of his services to the institution. Mr. Stone has served the College with zeal and ability since the year 1832.

WE learn that enteric fever has broken out at Shottery, near Stratford-on-Avon. One death has occurred out of seven cases reported. The disease is supposed to depend upon a sewage-contaminated well.

IT will be observed that the part of Dr. Brown-Séquard's lecture is somewhat short this week. It should be stated in explanation that he was called upon suddenly to accompany the Emperor of Brazil to the Continent.

THE PLAGUE.

PLAGUE is reported to have ceased in all the localities where it has recently been prevalent. The report is probably accurate with regard to Bagdad and the neighbouring districts on the Tigris and Euphrates, and also with regard to Shuster, in South-western Persia; but its accuracy in respect to Persian Kurdistan is open, perhaps, to question. Quarantine has already been relaxed in the Persian Gulf and in the Red Sea, and we may expect to hear very shortly of its termination.

In Constantinople, notwithstanding the turmoil occasioned by the war and the pre-occupation of the mass of the people with the events taking place in Bosnia and on the

frontiers of Servia and Herzegovina, the questions arising out of the recent prevalence of plague in Mesopotamia and Western Persia enlist a not inconsiderable share of attention, especially the question of quarantine. The traditional horror of plague in the Levant is so great that even the late terrible events in Constantinople, the great changes following thereupon, and the present state of confusion in the western provinces of the Ottoman Empire have had but little effect in diverting attention from the fact of the reappearance of the disease in a serious form, although the scene of reappearance is so remote from the capital and the European provinces. It is rumoured, indeed, that, notwithstanding the war, an international sanitary conference is contemplated at Constantinople to discuss measures of protection against plague, or, in other words, to discuss the question of quarantine, in anticipation of a probable renewed activity and further spread of the disease next year. In the present temper of the maritime nations who believe in quarantine, as exhibited in the Levant this year, we anticipate little good from such a conference. It would almost seem as if they had seized eagerly upon the occasion to revert to the incredible follies of the quarantine practices of fifty years ago, and as if they were determined that their judgment should be ruled by traditional ignorance, not by present knowledge of the mode of diffusion of plague.

Of the recent appearance of the plague in Persia we have as yet but very imperfect knowledge. In this respect Persia, as to its means of information, contrasts very badly with Turkey. The outbreak at Shuster is stated to have been of short duration, but very fatal while the disease lasted. The outbreak at Sakkys, in Persian Kurdistan, is stated to have been exceedingly severe. The outbreak in the town of Sakkys is of peculiar interest, because the district of this name, we now learn, was partly included in the area over which the outbreak of plague in Persian Kurdistan, in 1871, extended. Two villages in this district, namely, Kananias and Karava, certainly suffered from the outbreak. Both of these villages were visited by Dr. Castaldi, the Ottoman sanitary agent at Teheran, soon after the prevalence of plague in them, and his description of their arrangements furnishes an instructive example of the kind of home which plague has in Persian Kurdistan. Kananias, he states, lies west of Sakkys, a league distant. It is situated in a little arid plain, at the foot of the mountains, a short distance from the river Jagatu. The village consists of half-a-score houses leaning against each other and having low and contracted doors and windows. Before these houses lie heaps of ordure of every kind, and cow-dung dried in the sun and formed into cakes for fuel, wood failing here. The combustible is piled all around the village to a height higher than the windows, and is deposited in layers on the roofs. The most wretched misery, the most revolting filth, hems in, as it were designedly, these infected dens, within which live, or rather vegetate, from fifty to sixty individuals—men, women, and children. The cultivation of a few small lots of ground in the neighbourhood of the village furnishes these miserable individuals with an insufficient quantity of food. Twelve persons were attacked with plague in this village, eight of whom died. Karava, which lies also to the west of Sakkys, at about a league of distance, was deserted when Dr. Castaldi visited it. It contained fifteen houses, and had ordinarily a population of about a hundred. The houses were crowded together, and were as foul in themselves and in their surroundings as the houses in Kananias. In Karava there had been forty cases of plague, of which thirty-two had been fatal.

THE EXPLOSION ON BOARD H.M.S. "THUNDERER."

THE following is a brief account of further fatalities resulting from the terrible explosion in Stoke's Bay, and of the progress of the patients at Haslar Hospital since our report last week:—

On the 20th, 22nd, and 23rd five men died, bringing the total deaths in hospital up to twenty-four. Three have been discharged at their own request, leaving at this moment one officer and thirty-one men under treatment. Four are still considered dangerously, and four seriously ill, and are so reported in the list hung up at the gate for the information of their friends. Most of these still lie in a semi-unconscious state, greatly prostrated, and sustained by the assiduous administration of wine and nourishing food.

It is difficult to say what internal injuries, if any, may have been received to account for the symptoms in the living or the deaths of those who have died, irrespective of shock or scalding, but from what was observed in those who were killed on the spot, or who died soon after the accident, with evidence of serious external lesions, it is highly probable that in some others there are grave internal lesions likewise.

One man exhibits ulcers on the uvula, but appears to have very little the matter with him otherwise. Another has diarrhœa and is completely prostrated, but no blood is observed in the discharges. The worst cases remaining appear to suffer from a combination of meningitis, laryngitis, and shock, and are in a condition of great prostration, in which they would rapidly sink if not carefully watched by Deputy Inspector-General Loney and the other surgeons to see that wine, beef-tea, milk, sago, arrowroot, &c., are regularly administered, and to ensure this a surgeon is *always* on duty with them in the hospital.

The scalds are all progressing favourably under the application of the carron oil, with lint and cotton wadding on those parts that are very badly burnt, and a drying powder composed of oxide of zinc, starch, and flour, on other parts.

In one or two cases the eyes are much inflamed, and their condition excites the liveliest apprehensions. Ugly cicatrices about the neck and arms are also to be feared in a few.

THE VIVISECTION BILL.

A MEETING of the Metropolitan Branch of the British Medical Association was held in St. George's Hall on Wednesday last to consider the Vivisection Bill.

Mr. JONATHAN HUTCHINSON, president of the branch, took the chair, and, in opening the proceedings, expressed the opinion that the Bill was the result of exaggerated statements on the subject of vivisection. He further said that the Home Secretary had indicated to some of the representatives of the profession that the Government might consent to modify the Bill still further, and he thought the meeting should press on them the desirableness of amending the Bill. He gave the promoters of the measure full credit for the goodness of their intentions, and remarked that any differences that existed between them and the medical profession were due to ignorance and prejudice.

Dr. ANDREW CLARK moved the first resolution, which was seconded by Dr. PAVY: "That this meeting, although fully recognising the improvements effected in Lord Carnarvon's Cruelty to Animals Bill in its latest form, is still strongly of opinion that, should it become law, the progress of science will be most seriously hindered, and the interests both of animals and of men much prejudiced."

The motion was carried almost unanimously.

Dr. BARNES moved the second resolution, which urged the abandonment of the Bill for the present session.

This was seconded by Mr. ADAMS, and carried unanimously.

Mr. GAY proposed a resolution, suggesting that if legislation was thought necessary in the future, it might take the form of an Act for the simple registration of persons, &c., licensed on the plan of Dr. Lyon Playfair's proposal, or an extension of Martin's law, applicable to cruelty of all forms to all animals, but exempting under certain regulations experiments performed solely for the advancement of science. In supporting the motion, Mr. Gay remarked that if the Legislature wanted to put down real cruelty, they should direct their attention to the sports which were so fashionable at Hurlingham.

This motion was also adopted, and the proceedings brought to a close by the customary votes of thanks.

THE EARL OF LEICESTER has promised a donation of £5000 towards the enlargement of the Norfolk and Norwich Hospital. It is intended to convene a meeting a few months hence for the purpose of furthering the project, at which it is hoped the Prince of Wales will preside.

Correspondence.

"Audi alteram partem."

CEREBRAL LESIONS.

To the Editor of THE LANCET.

SIR,—Dr. J. Wilson's (Worcester) case, headed "Cerebral Hæmorrhage; Aphasia," reported in THE LANCET of July 15th, p. 81, is so likely to be misunderstood and quoted as an instance of aphasia without damage to the third left frontal convolution that it may be well to call attention to the fact that, in Dr. Wilson's concluding words, "aphasia was not a marked symptom," and that, indeed, there was, strictly speaking, no aphasia whatever. Such speechlessness as was observed was merely the speechlessness of indistinct articulation, resulting from the shock of the apoplectic attack, to which I have referred in a paper on the Mechanism of Speech and Thought. Already, on the day after the attack, the patient "answered questions after some moments, but incoherently"; later, "he muttered to himself," and in less than a week "answered questions distinctly."

Except in one respect, which may perhaps be explained, the case corresponds closely with those I have recently described in a communication to the Medico-Chirurgical Society, under the name of "Ingravescent Apoplexy," with one, indeed, almost exactly. I cannot doubt that the hæmorrhage occurred, as in the cases there given, between the "external capsule" and the corpus striatum anteriorly, and that this ganglion and the thalamus were displaced and concealed by the clot, and not destroyed. It would be a matter of great interest if the details of the attack could be ascertained. The patient is said to have been brought to the hospital in a fit. Did this come on suddenly, or had he gradually fallen into the partially unconscious condition in which he was found on admission? Dr. Wilson will add greatly to the value of his communication by supplying this information.

I remain, Sir, your obedient servant,

Seymour-street, July 24th, 1876. W. H. BROADBENT, M.D.

THE TREATMENT OF CLEFT PALATE.

To the Editor of THE LANCET.

SIR,—I have had so many courteous and friendly inquiries, from Continental as well as English surgeons, respecting the treatment of cleft palate by the application of strong acid alone, to which you kindly referred in "the Mirror" of May 6th, 1876, that I shall consider it a favour, and it will save trouble, if you will permit me to explain in a few words the *modus operandi* I am in the habit of adopting.

I first produce a raw surface by carefully applying with a stick—*not a glass rod*—the acid. nitric. of sp. gr. 1·500, and in a few days afterwards I use in the same way the acid. nitric. sp. gr. 1·420 (Ph. Brit.) about once or twice a week to the part, but especially to the fork of the cleft. I have had no bad symptom in any case, and although it is too early for me to lay before the profession the results of my experience, I believe there are numerous cases, in infants for example, and in others who dread an operation, in which this practice may be carried out; but of course it is not universally applicable. I may add that I have been induced to try this method from observing the singular success that follows the application of nitric acid in cases of cleft palate in which, after operation, the wound has partially opened. I have had recently, at St. Thomas's Hospital, two such cases, which, but for this method of treatment persistently employed, would have required a second operation.

Whilst I am on this subject perhaps you will allow me to say that Dieffenbach's operation (or that introduced into this country by Sir Wm. Fergusson) is a very easy proceeding if practised in the following manner, the plan I myself prefer:—Ether or chloroform having been administered, and the mouth kept open with a gag, I first pare the mucous membrane, if possible in one piece, to be sure that a continuous raw surface is produced. The anæsthetic effectually relaxes the muscles of the palate, so that they do not act spasmodically, and in paring the edge there is very slight hæmorrhage. The bone is then divided; and, as in this step the bleeding is frequently very free, not to say profuse, I thoroughly plug each side with a piece of dry lint, which instantly arrests the hæmorrhage. I first tried this method some months ago, and the excellent effect of the practice was remarkably illustrated in a case in which I operated at St. Thomas's Hospital on Wednesday last. The remainder of the operation need not be referred to here. Instead, however, of dividing the muscles at the outset, which in many instances is attended by troublesome hæmorrhage, I find that their action is sufficiently suspended during the healing process by carrying the knife for a short distance in the soft palate in a line with the incision made in the hard palate. If necessary, a few fibres of the palato-glossus and the palato-pharyngeus may also be divided in front and behind the tonsil.

I quite concur with Sir William Fergusson that in many cases the sides of the bony palate may be kept in apposition by lint alone, without the aid of sutures, and I now either leave the lint that has been used to arrest the hæmorrhage, or replace it by another piece of more suitable size.

It appears to me that the difficulties of staphyloraphy arise chiefly from the hæmorrhage which hampers the surgeon. Make the operation comparatively bloodless—as it is if performed in the manner above described,—and it is one of the simplest in surgery.

Your obedient servant,

FRANCIS MASON.

Brook-street, Grosvenor-square, July 14th, 1876.

MILITIA MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—At length the new Warrant is out. We are, by Clause 1, to bind ourselves to suffer embodiment, to be sent to camp, to be severed from our practices for perhaps months or years, and then to be returned with nothing to look forward to but £1 per day for twenty-seven days' training; for Clause 10 says "you shall look for no pension or gratuity," and Clause 9 of the Warrant and Clause 5 of the Instructions dock the allowances of many of us for staff and recruiting, and Clause 7 of Instructions takes the preliminary drill out of our hands, and fifty-six days' pay with it. These are serious items to be robbed of, and without a word of any compensation. This treatment is to be applied to men who have, many of them, twenty years' experience, the confidence of their officers and men who have been embodied twice, counting by years at a time, served both at home and abroad, and have always been ready for duty when called upon.

The pay and emoluments of our position were certain, and we could afford to hold the post. Now our incomes are taken from us, and for a paltry month's pay we are asked to bind ourselves to the same conditions as hitherto under Clause 11. This clause speaks of advantages? These can only exist in the fertile imagination of the framer of the Warrant. The closing paragraph shows still further the fertility of resource, for it falls back upon that attenuated form, the A.M.D., and says it shall fill the gaps in the hundred and fifty-nine militia regiments, created, I trust, by the men who will *not* take on under Clause 11. Why, Sir, this unfortunate department has very many gaps of its own to fill, therefore how can it take charge of us? Mr. Hardy must redeem the promises made by Lord Cardwell and himself in their places in Parliament—that the wrongs inflicted by the brigade depôt system upon militia surgeons should be met by compensation.

I am, Sir, your obedient servant,

July, 1876. MILITIA.

To the Editor of THE LANCET.

SIR,—The Warrant affecting militia surgeons has, within the last few days, been promulgated, and I venture to affirm a more flagrant act of injustice has never been perpetrated. I and many other militia surgeons have held our appointments upwards of twenty years; some of us have served two embodiments, and accompanied our regiments when

ordered to other stations, even out of England. When we were appointed we had every reason to believe our appointments were, as heretofore, for life, or during good conduct. My appointment has produced a yearly income exceeding £150. By this new warrant I am to serve only during the training—namely, twenty-seven days; for this I am to receive £1 per day, which, with allowances, will be probably under £40. A considerable portion of this will be absorbed by regimental expenses. The duties of attending on staff during disembodiment, examining recruits, and serving during preliminary drill will be done by the surgeon of the brigade depôt, thus depriving me of £110 a year, and for which I receive no compensation. Lord Cardwell stated, when remonstrated with, that the claim for compensation would be considered, and each case decided on its own merits. Mr. Hardy repeated this assurance, and this is the result.

I trust my brother militia surgeons will immediately bestir themselves, and bring this injustice before the notice of Parliament.

I am, Sir, yours obediently,

July 24th, 1876. A MILITIA SURGEON.

ARMY MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—As a new Warrant for the Army Medical Department has just seen the light, it appears a fitting time to renew our protest against the persistent way in which the Indian Government ignores the increase of pay the different grades of the department obtained by the Warrant of 1867 (which is not altered in these essentials by the last) as compared with that of 1857. Thus surgeon-majors of over fifteen years' service are only given 18*s.* instead of £1 a day, as at home; surgeon-majors of over twenty years, 22*s.*, instead of 25*s.* The loss is twenty-four rupees monthly to the former class, twenty-nine to the latter, and other ranks in proportion. Now, why should the increase granted us by the Warrant of 1867 be refused? It appears a gross injustice.

Those coming in under the new system had better see what they are going into. Assuredly they will soon find themselves in India. Their £250, or £20 10*s.* a month, will be represented by 164*r.* only, as the Indian Government by a pleasant fiction makes the rupee do duty for half-a-crown in converting English into Indian money. Their pay then is 164*r.*; batta allowances 178*r.* 60*a.*: making the munificent total of 342*r.* 10*a.* a month. If this will induce good men to face an Indian climate for five years at the very least, it will greatly surprise

Yours, &c.,

India, June 12th, 1876. A SURGEON-MAJOR.

*** We have received numerous communications on this subject.—ED. L.

THE UNIVERSITY OF DURHAM.

To the Editor of THE LANCET.

SIR,—It is to be hoped that the University of Durham will reconsider their determination not to admit candidates to their examination for the *ad eundem* M.D. till they have attained the age of forty years.

In my own case, the now existing state of affairs is particularly hard. If you will grant me a short space to describe it, I think you will see that men situated as I am have some reason in complaining.

My father is a medical man, doing a large practice in a London suburb. By the time I was considered fit to attend the hospital—that is to say, when I had matriculated at the University of London, it was a very self-evident fact that he stood in need of assistance. I was therefore compelled, unless I was willing to give up all hope of succeeding him, to make as much haste as possible in the process of rendering myself qualified. This I accomplished shortly after my twenty-first year. I have been pretty hard at work ever since. It may be said, why did I not go on and take the London M.D. after I had got into practice? In reply, I would say that as I could not spare the time before I left the hospital, so after I had left, and was engaged in general practice, how could I be supposed to be able to attend the necessary lectures and do the reading required for that not over-easy series of examinations?

Since I have been in practice I have felt the want of the M.D. I have neighbours who do not hesitate to call themselves Dr. this and Dr. that, but who have no real degree, being simply licentiates of some College of Physicians. Now, as I would rather remain "Mr." than call myself "Dr." under these conditions, it does seem somewhat hard that I must wait some ten or eleven years before I can call myself "Dr."

Although I have not been able to do the amount of attendance at the hospital, or perhaps even the reading, necessary for the London M.D., I can with confidence say that I have not allowed myself to become rusty. I believe that I could with ease pass such an examination as is now required at St. Andrews (or, indeed, any other fair examination) with my medical capabilities.

As I have reason to know that my case is not an isolated one, but is parallel to that of the sons of many hard-worked general practitioners, I feel emboldened to lay it before you, and trust you will find a corner for my statement somewhere in your journal.

I remain, yours, &c.,

July, 1876. M.R.C.S., L.S.A., 1869.

THE BRUSSELS EXHIBITION.

(*From our Special Commissioner.*)

No. II.

HAVING performed the unpleasant task of pointing out the shortcomings of the English in Classes 4 and 8 (Help to the Wounded in time of War, and Medicine, Surgery, and Pharmacy in their relation to other classes of the Exhibition), I pass on to the consideration of the exhibits of other countries in these classes. In Class 4, Germany, as the greatest military and scientific nation in Europe, is *facile princeps*. The German show in this class is well worth seeing, and would alone repay a visit to Brussels.

First and foremost, I must mention the large number of railway carriages specially arranged for the transport of the sick and wounded in time of war, and which constitute in themselves a most remarkable feature of the Exhibition, and one in which the public naturally take the most interest. The best exhibit of this class, however, is included in the Austrian section, and is shown by the Sovereign Order of the Knights of Malta. It is a complete train arranged for the sick, and consists of—1. A carriage for the commandant and doctors; a control carriage, in fact. 2. A carriage entirely devoted to storing provisions. 3. A carriage arranged as a kitchen, with the necessary stores, utensils, &c. 4. A store-carriage in which are drugs, medical comforts, and surgical appliances. 5. Three carriages arranged as ambulances, and able to accommodate ten patients each. The litters containing the sick are placed lengthways, and each carriage contains a stove for maintaining a comfortable temperature. Although three carriages only are sent, it is obvious that their number might be increased *ad libitum*, and doubtless would be so increased according to the necessities of the case.

In addition to the railway carriages, the Knights of Malta exhibit an ordinary road ambulance-waggon (voiture ambulance de campagne), constructed to hold four men severely or eight slightly wounded, and arranged on the system of Baron Mundy. The Knights of Malta possess twelve of these carriages, which they employ to transport wounded soldiers from the railway stations to the hospitals.

The Exhibition is rich in exhibits of this class. The order of "Chevaliers Teutoniques" show specimens of their campaigning material—viz., six carriages and fourgons for stationary and travelling hospitals, a carriage arranged as a kitchen, a tent for operations, a field dispensary, boxes of instruments, litters for employment in mountainous districts, and a copy of their reports.

The Prussian War Ministry shows a similar collection of implements and ambulances, and, in addition, a model of a barrack hospital especially designed during the war of

1870–71 by Her Royal and Imperial Highness the Crown Princess of Prussia. The main features of this hospital are the cheapness of its construction (it is made entirely of wooden planks), the perfection of its ventilation, and the novel fact that while the windows are fixed and remain shut, the walls between them are made to open and shut. The reason for this innovation was—first, to avoid the breaking of the windows; and, secondly, to try to get over the inherent tendency of patients to shut windows, and to see whether they would pay more respect to what was novel and had the appearance of special design. The result was, I was told, all that could be desired.

Ambulance-waggons, litters of various kinds, and similar articles are shown also by the "Central Committee of the German Association for the Relief of the Wounded in time of War," and the various exhibits are contributed by the branch societies in Berlin, Altona, Hanover, Darmstadt, Dresden, Munich, and Carlsruhe. These exhibits are all of one description, and there is not very much that is new, but the large number of them shows how deeply the German nation is impressed with the duty of bringing the highest science and the greatest ingenuity to the relief of those defenders of their country who are unhappily wounded on the field of battle. Even Belgium, that has kept free from wars for a longer period than ourselves, shows an excellent ambulance, contributed by the Belgian branch of the Red-Cross Society. It is well ventilated, and can accommodate ten men badly wounded, and ten others if only slightly wounded. The ventilation has been managed with great ingenuity, and shocks and jars to the wounded have been avoided by the employment of india-rubber pads and bands, and wheels let into the framework of the litters, for them to slide upon. The stores, which can be stowed away, are very complete, and comprise a large assortment of drugs, instruments, bandages, food, cooking utensils, and large reservoirs under the box seat filled with water, bouillon, and tisane. The general appearance of the carriage is that of a large omnibus. It is necessarily heavy, and for bad roads six horses would be necessary.

The varieties of litter cannot but astonish, and the ingenuity with which they have been adapted to every kind of circumstance is certainly interesting. In the Russian section there is a model of a dromedary carrying wounded men in litters slung on either side of its huge hump, and this arrangement was employed, I was told, during the Khivan expedition. In the English section we mentioned the mule panniers constructed for the transport of the wounded. Then we have them for carrying by two porters, or for transport on the back of a single man; for slinging like a hammock; for resting on tressels in a tented waggon or a railway carriage; for transport on the hind seat of a dog-cart or on an ordinary two-wheeled trunk or barrow. The details of construction are innumerable. They double up, or roll up, or bend to any position, so as to accommodate the invalid in every possible way. I may especially mention Neuss's barrow litter, which has been constructed for the order of Johanniters, and which is shown in the English as well as the German department. It is light, and is accurately balanced on two large wheels, so that it can be propelled with all the ease of a perambulator. When not being wheeled legs let down from the shaft, so that the horizontal position is maintained. The curve of the litter has been thoughtfully arranged, and is so managed that the femora being horizontal, the back ascends and the legs descend a little. Beneath the back there is a hollow space, in which a considerable quantity of drugs or other necessaries may be stowed. There are rests for the arms, and a hood and apron, so that the occupant can be completely covered or completely exposed at will. The litter is supported on the axle-tree by very first-rate springs. Looking at these beautiful litters and ingeniously constructed vehicles of various kinds, one cannot help feeling rather sceptical as to the amount of use to which they will be put in case of war. Battles are fought often at great distances from railways or even good roads, or the railways and roads may have been destroyed by wear and tear, or for strategic purposes. The armies now-a-days are a hundred thousand a side. The carnage is enormous, and when the pinch comes the thoughts of commanders are for the able-bodied soldiers rather than for the unfortunate wounded. Still, something may be done, no doubt, and we know that during the late war the greatest differences were found in the various ambulances, and while some were able to afford an enormous amount of orderly relief, others were nearly useless from mismanagement. Who has not heard of the Wurtemburg train for transporting the wounded, and the blessing it proved to thousands? With a recollection of this kind coming before us, we feel it would be unwise to show even a small amount of scepticism, or to speak otherwise than encouragingly of the noble efforts of humanitarians in these attempts to alleviate the horrors of modern civilisation.

Fischer and Co., of Heidelberg, and Edward Lipowsky, of the same place, have on show a very great quantity of apparatus for the transport and comfort of the sick, in the form of couches, chairs, litters, baths, commodes, &c. The exhibits of both these firms are very numerous, but I did not detect anything in duplicate—a great contrast to some of the English show cases in which the exhibitor has sought to attract attention by repetitions of the same article. There is nothing which strikes us as being particularly novel among Fischer's goods, but they all have a workmanlike and serviceable aspect, and the ingenuity displayed in altering the various angles at which the body may be put is certainly very great. There is one couch which is so constructed that the legs (which are received upon separate supports) can be moved independently of each other, which might be an advantage in many cases, particularly (as it struck me) in cases of paraplegia requiring catheterisation.

Lipowsky's chief novelty, to English eyes, is a fracture bed, in which the mattress is formed of separate block-pads, fitting together like a dissected puzzle, and which can be fastened in any position by long pegs fitting into holes in the framework of the bed. Useful, perhaps, but certainly complicated, and never, I should think, necessary.

Personne, of Brussels, shows a frame which can be fitted to any bed, and by means of which an invalid can be raised off the mattress for purposes of dressing, cleansing, or evacuation, tilted on one side or completely inverted if necessary.

In the Russian department I caught sight of an excellent self-propelling chair, with light metal wheels, and which ought to have been inexpensive from its appearance.

To medical men perhaps the most interesting stand in the Exhibition is that which has been sent by Professor Esmarch, and which shows, by means of samples, models, and drawings, the various applications of those methods of treatment which go by his name.

The various purposes to which elastic bands may be put are clearly demonstrated, and perhaps the most interesting exhibit having reference to this matter is a drawing showing an extemporised aortic compress for the field hospital. The compress consists of a roller-bandage transfixed through its centre by a stiff rod about half a yard long. The patient is represented lying on a litter, the compress is *in situ*, and the pressure is maintained by an elastic band passing from the extremities of the rod to the sides of the litter.

Esmarch's strong point, if I may say so, seems to be the ingenuity with which he adapts his treatment to circumstances, and this is well shown in the use which he makes of the German military boot—which it will be remembered is of the type known as a wellington—in cases of injury to the legs. A boot is shown which has been cut down the centre of the leg so that the golosh is left for the reception of the foot, while the upper leathers are completely opened and thrown back. Now see the use to which this upper leather is put. It is rolled round a stick down to the point where it joins the heel, the ends of the stick rest on the handles of the litter and thus a very safe and convenient support is afforded to the foot.

Esmarch's handkerchiefs will be certain to attract attention. They consist, as many of your readers are aware, of triangular handkerchiefs which make a very excellent first application on the field of battle; and the chief novelty about them is this, that they are all painted with pictures illustrating in an unmistakable manner the best methods of applying them. This pictorial method of conveying instruction is used by Esmarch on many occasions and (especially for military purposes) is most commendable. Thus a tin of plaster of Paris is hermetically sealed with illustrations of its use, and his splint-material made of stiffened calico is made in a similar way to tell its peculiar virtue.

Professor Volkmann, of Halle, has also a table devoted to some of the methods which he particularly affects. Perhaps the most interesting thing here is the model showing the suspension of a fractured leg by means of a front splint furnished with staples, through which the suspending cords are passed. His bracketed plaster bandages are well made, but scarcely novel. A very useful piece of apparatus is a small wooden tressel, which can be fastened to the end of a table or bed, and which is employed to raise the pelvis during the application of plaster or starch, and allows the hand of the dresser to get beneath the loins for applying the spica bandage.

Port, of Munich, shows many excellent splints made of telegraph-wire, and which show a considerable development of the idea which Surgeon-Major M'Nalty lately put forward in THE LANCET. Very neatly-made wire splints are also shown by Sattler Fière et Sœur in the Belgian Department; and many splints are to be found in the Exhibition made of thin zinc or tin, which are thin enough to be cut with stout scissors, and which are easily moulded to any form. Splints of cardboard, osier twigs, felt, and wood are also to be found.

In my next letter I hope to touch upon hygienic matters.

Obituary.

JOHN WEBSTER, M.D., F.R.S.

THE death of Dr. Webster, which took place at St. Andrews, N.B., on the 21st instant, at the age of eighty-two, will cause a blank in the professional world, notwithstanding that he had for some time retired from his position in it. He never occupied a brilliant place in practice or in general reputation; but in every scientific institution he was a welcome and valued member, bringing to it good judgment and solid views on most of the important topics of the day. His character was chiefly commended to his acquaintance, far and near, by the genial bent of his disposition, by his fair judgment of everybody, and his acceptance of every offered kindness in simple reciprocity.

Dr. Webster was a keen observer, and travelled much, always directing his inquiries to subjects which bore on the advancement of medical science, and was especially observant of institutions for the benefit of the insane and of idiots, and an advocate of the cottage system of separate location of such patients rather than of congregating them together.

FREDERICK DISTING TOTHILL, F.R.C.S. Eng.

THE subject of this notice was the son of the rector of Hittisleigh, Devon, and receiving his early education under his father, he commenced his medical career at the Devon and Exeter Hospital. He subsequently entered the medical school at St. Bartholomew's Hospital, and after passing his examinations he settled in London, and commenced practice as resident surgeon at the Children's Infirmary, in Broad-street, Golden-square. Succeeding to a small practice in the neighbourhood, he was appointed surgeon to the C Division of Police by the late Sir John Fisher; also surgeon to H.M. commissioners of board of works for the establishment of the constabulary of royal parks. In his relation to the police force he was much respected in consequence of his kindness of heart and the conscientious manner in which he discharged his duties, and in private life his friends and patients will lament his death on account of the geniality of his character and the heartiness of his friendship. He died at his residence, 8, Charles-street, St. James's, from an attack of erysipelas of the face, subsequently extending to the legs, which proved too much for a constitution undermined by diabetes.

JOHN RINGLAND, A.B., M.D., T.C.D.

ANOTHER distinguished member of the profession in Dublin has passed away, in his sixty-first year, after a lengthened illness. The deceased enjoyed for many years a lucrative midwifery practice, and was connected with the Coombe Lying-in Hospital as one of the Masters for a considerable period. He also occupied the Chair of Midwifery in the Ledwich School of Medicine, and was the author of several monographs on obstetric subjects in various medical publications. Dr. Ringland was M.D. of the University of Dublin, Fellow of the College of Physicians, Member of the Royal Dublin Society and Royal Irish Academy, and formerly a President of the Obstetrical Society of Dublin. Dr. Ringland was a kind and humane man, and was much respected by his professional brethren.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF LORDS.

MEDICAL ACT (QUALIFICATIONS) BILL.

ON Tuesday this Bill was, on the motion of the Earl of SHAFTESBURY, read a second time.

HOUSE OF COMMONS.

VACCINATION ACT.

Mr. P. A. TAYLOR asked the President of the Local Government Board if he was aware that another summons had been issued against Mr. Pearce, of Andover, for non-compliance with the Vaccination Act, he having already suffered twenty-two previous convictions, and whether he proposed to take any steps in the matter.

Mr. SCLATER BOOTH said he was aware that Mr. Pearce had been prosecuted a number of times for non-compliance with the provisions of the Vaccination Act. He received a complaint from Mr. Pearce in the autumn of last year, upon which he communicated with the guardians, and their reply was that Mr. Pearce was a member of the Non-vaccination Society, and that they presumed the Society paid the fines in his case. He communicated the views of the Local Government Board upon the subject to the Board of Guardians, which were similar to those addressed to the Evesham guardians on the previous occasion. In May last Mr. Pearce complained of his being subjected to persecution by the guardians, and stated that two children had then died in Andover, and that two more were dying, from the effects of vaccination. He caused a special inquiry to be made into the truth of the allegation by a competent medical officer, who afterwards reported that there was no reason to suppose that the deaths of these two children were caused by vaccination. He had no intention of entering further on this case, and so the guardians had been informed. The subject was one of very great difficulty, and was constantly under his attention, and he hoped that some means might be devised by which to reconcile the due execution of the law with some modification of the punishment.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at meetings of the Court of Examiners on Tuesday and Wednesday last:—

Appleby, John T., Knutsford.
Ballard, Philip, Bromyard.
Beverley, William H., Leeds.
Blaikie, John R., L.S.A., Oswestry, Salop.
Cash, John T., M.B., Manchester.
Cattle, Charles H., Pontypridd.
Dawson, Cantley, Leeds.
Donbavand, Edgar John, Hackney.
Dunbar, James J. M., Talbot-road.
Ellis, Philip M., Chudleigh, South Devon.
Folkes, Frederick H., Dukinfield.
Gosling, Charles E., The Green, Richmond.
Harding, George C., Clapham.
James, Charles, St. Just, Cornwall.
Kilbride, James, Dublin.
Lapage, Charles C., Leeds.
Lennon, George L., Manchester.
Marsh, Octavius E. B., L.R.C.P., Cotham, Bristol.
Mercer, Robert, Bradford, Yorks.
Moxon, William, Birmingham.
Phillips, Alfred, L.S.A., Primrose-hill-road.
Phillips, Charles H., Ramsbottom, near Manchester.
Pratt, William, M.D., Newtown.

Richardson, Thomas W., L.S.A., Norwich.
Robinson, Ernest L., St. Martin's, Guernsey.
Routh, Jules Isham, Manchester.
Spofforth, John, Litchfield.
Sweeting, Martin C., Knaresborough.
Thomas, Abraham G., Aberayron, South Wales.
White, Alfred O., Tangier, Africa.
Wiglesworth, Joseph, Liverpool.
Williams, Charles L., Sattley, Warwickshire.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on July 20th:—

Anderson, Alexander Richard, Hammersmith.
Cox, William Laird, Abbey-road, Kilburn.
Duncan, Robert Byron, Glasgow.
Giles, George Michael James, North-terrace.
Gilham, Thomas Henry, Weaverham, Cheshire.
Hussein-Khan, Mirza, Hatherley-grove, Bayswater.
Jackson, Robert Alexander, Norfolk-square.
Jones, Price, Llanrwst, Denbighshire.
Little, James, Maryport, Cumberland.
Parker, Arthur Frederick, Clifton, Bristol.
Richardson, Thomas William, Norwich.
Williams, William Henry, Sherborne, Dorset.

The following gentlemen passed the Primary Professional Examination on the same day:—

Thomas Dutten, Guy's Hospital; William John Candler, Allen Dingley, and Donald Alexander Coles, St. Bartholomew's Hospital; Frank Squire Borcham, Charing-cross Hospital; William Henry Battle, St. Thomas's Hospital.

THE Clothworkers' Company have voted £105 per annum to the London Hospital. Mr. F. C. Capel has given £100 to the Seamen's Hospital, Greenwich.

THE Improvement Commissioners for the town and district of Hove announced, at a recent meeting, that the Local Government Board had sanctioned a loan of £5000, to be expended in improving the drainage of that portion of Brighton which does not form a part of the municipal borough.

A MEETING was held at the Town Hall, Bromsgrove, last week, convened by Dr. Prosser, the High Bailiff, who occupied the chair, to consider the desirability of establishing a Cottage Hospital. A resolution to do so was passed unanimously, and a committee appointed to carry out the necessary arrangements.

MR. DUNCAN FERGUSSON, who passed the preliminary examination in arts on the 4th of April, 1874, and registered as a medical student the following 1st of May (son of the Rev. Samuel Fergusson, of Fortingall), was drowned on Saturday last while bathing in Loch Voil. As he was a good swimmer, it is supposed that he was seized with cramp.

ON the 20th inst. Vice-Chancellor Hall further suspended the injunction against the Mayor and Corporation of Darlington, which was originally granted in March, 1875, with reference to a nuisance caused by the town sewage. In May last the injunction was suspended for two months, and on the 20th inst., after the production of evidence that certain progress had since May been made towards carrying out the new town sewage scheme, the suspension was further extended until the last motion day in Hilary sitting. This extension was opposed on the ground that the local prevalence of fever was due to the nuisance arising from the pollution of the stream with the town sewage. On the next hearing of the case the injunction will be two years old.

HEALTH OF DUBLIN.—During the quarter ending July 1st the number of births registered in Dublin amounted to 2272, and the deaths to 2040, or 26 per 1000. Of the 2040 deaths registered, 633, or 32 per cent. of the total deaths, occurred in the various hospitals, prisons, lunatic asylums, and workhouses. The deaths from zymotic diseases numbered 300, being equal to an annual rate of 3·8 per 1000. The principal causes of death were as follow:—Bronchitis, which caused 299 deaths; phthisis, 26; convulsions, 134; heart-disease, 108; pneumonia, 76; fever, 50; hydrocephalus, 45; mesenteric disease, 44; scarlatina, 42; paralysis, 41; brain-disease unspecified, 40; measles, 40; whooping-cough, 37; cancer, 33; diarrhœa, 30; apoplexy, 28; liver-disease, 26; croup, 18. The deaths from violent causes amounted to 62, of which 52 were accidental, 1 homicidal, and 7 suicidal. The average temperature for the quarter was 51·2°, and the rainfall measured 5·32 inches.

VACCINATION GRANT.—W. N. Symonds, Croyland district, Peterborough Union, has received, for the third time, the Government grant for efficient vaccination.

CONVICTION UNDER THE MEDICAL ACT.—On Monday last S. H. Whitherington, a chemist and druggist residing at 410, Wandsworth-road, Clapham, was charged by the East London Medical Defence Association, in the Wandsworth Police Court, with falsely assuming the titles of "doctor" and "surgeon." It was pleaded for the defendant that he was the partner of a qualified medical man, that the titles he was charged with assuming were placed on his lamp not by himself but by his partner, and without his consent, and that he now employed a qualified man named Kingston to see his patients for him. The magistrate inflicted a penalty of £15 and costs.

Medical Appointments.

BARKER, Miss A. R., has been appointed Resident House-Surgeon and Secretary to the Birmingham and Midland Hospital for Women, vice Miss E. Pecherf, resigned.

BRITTON, T., M.D., M.R.C.S.E., L.S.A.L., &c., has been reappointed Medical Officer of Health for the Barkisland, Brighouse, Elland, Hipperholme, Luddenden-Foot, Midgley, Northowram, Queensbury, Rastrick, Rishworth, Shelf, Southowram, Sowerby, Sowerby-bridge, Soyland, and Warley Urban, and Halifax Rural, Sanitary Districts, at £700 per annum for five years.

BRODRIBB, F. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Colne and Marsden Urban Sanitary District.

BURNESS, Dr. A. G., has been appointed Medical Registrar to the Hospital for Sick Children, Great Ormond-street, vice Barlow, resigned.

CAREY, R. J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the West Ham No. 4 District of the West Ham Union, vice Kelland, deceased.

CHADWICK, W., M.R.C.S.E., has been appointed Junior Resident Medical Officer to the Leeds Public Dispensary.

COLE, G. M., M.R.C.S.E., has been appointed House-Surgeon to St. Peter's Hospital for Stone &c., Berners-street, vice Bird, resigned.

DOUGALL, J., M.D., has been appointed an Extra Dispensary-Physician to the Royal Infirmary, Glasgow.

FAEE, A., L.R.C.P.Ed., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer of Health for the Parish of St. Mary, Lambeth, vice MacCormack, resigned.

FLEMING, W. J., M.B., F.F.P.S.G., has been appointed an Extra Dispensary-Surgeon to the Royal Infirmary, Glasgow, vice Lothian, appointed a Dispensary-Surgeon.

GEMMILL, W., M.B., C.M., has been appointed Medical Attendant to the Mull of Galloway Lighthouse, vice Dunbar, resigned.

HANHAM, F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Bath Union Workhouse, vice Gore, resigned.

HUTCHINSON, V., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for No. 3 Sub-district of the Auckland Rural Sanitary District. £50 per annum.

JONES, R., L.R.C.P.Ed., L.F.P.S.G., has been appointed Junior Assistant Medical Officer to the Warwickshire Lunatic Asylum, Hatton, vice Seed, resigned.

KILBURN, W. B., M.R.C.S.E. & L.M., L.S.A.L., has been reappointed Medical Officer of Health for No. 2 Sub-district of the Auckland Rural Sanitary District. £50 per annum.

LEIGH, T., L.R.C.P.L., M.R.C.S.E. & L.M., has been appointed an Acting Surgeon to the Brighton Hospital for Sick Children, vice Beavan, resigned.

MCKANE, G. O., L.R.C.P.Ed., L.F.P.S.G., has been reappointed Medical Officer of Health for No. 1 Sub-district of the Auckland Rural Sanitary District. £50 per annum.

MAKINS, G. H., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Seamen's Hospital, Greenwich, vice O'Farrell, resigned.

MURPHY, H. H., L.R.C.P., M.R.C.S.E., L.S.A.L., B.A., M.B., has been appointed House-Physician to the Seamen's Hospital, Greenwich, vice Law, appointed Resident Medical Officer to the Hospital for Consumption &c., Brompton.

OLIVER, T., M.B., C.M., has been appointed Medical Officer for No. 2 District of the Preston Union, vice Haldan, resigned.

PAUL, E. W., L.K.Q.C.P.I., M.R.C.S.E. & L.M., has been appointed Medical Officer and Public Vaccinator for No. 4 District of the Wells Union, Somersetshire, vice Markby, resigned.

RICHARDSON, J., M.D., has been appointed Medical Officer and Public Vaccinator for Nos. 4 and 5 Districts of the Thingoe Union, Suffolk, vice Watson, resigned.

ROUTH, R. L., L.F.P.S.G., L.R.C.P.Ed., has been appointed Medical Officer and Public Vaccinator for the Swalcliffe District of the Banbury Union, vice Milburn, resigned.

RUDDUCK, J. B., M.R.C.S.E., L.S.A., has been appointed Resident Accoucheur to the London Hospital.

SIMPSON, E. P., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Weymouth Port Sanitary District.

SMITH, J. H., M.D., has been appointed an Assistant Medical Officer to the Southamptonshire Lunatic Asylum, Knowle, vice Kitching, resigned.

STEPHENS, R. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Roche District of the St. Austell Union, vice Goodfellow, resigned.

THOMSON, J., M.B., C.M., has been appointed an Assistant Medical Officer to the Southamptonshire Lunatic Asylum, Knowle, vice Levinge, resigned.

VINCENT, J., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Mitford and Launditch Union Workhouse, vice Hopson, resigned.

WHITTLE, E. G., M.B., L.R.C.P.Ed., has been appointed an Acting Surgeon to the Brighton Hospital for Sick Children, vice Ingle, resigned.

Births, Marriages, and Deaths.

BIRTHS.

AUSTEN.—On the 12th inst., at Ramsgate, the wife of Josiah Austen, L.R.C.P.L., prematurely, of a daughter.

COCKBURN.—On the 16th May, at Adelaide, Australia, the wife of John A. Cockburn, M.D., of a son.

COX.—On the 9th inst., at Wellington-villas, Brighton, the wife of Arthur H. Cox, J.P., of a son.

DONALD.—On the 14th inst., at High-street, Paisley, the wife of J. T. Donald, L.R.C.S.Ed., of a son.

HILL.—On the 17th inst., at West Cromwell-road, the wife of Thos. Wood Hill, L.R.C.P.Ed., of a daughter.

JOHNSON.—On the 20th inst., at Chapel-street, Salford, the wife of T. M. Johnson, M.D., of a daughter.

MACDONALD.—On the 10th inst., at Grosvenor-street, Edinburgh, the wife of Keith Norman Macdonald, M.D., of a daughter.

MEADOWS.—On the 22nd inst., at Otley, Ipswich, the wife of G. F. W. Meadows, M.R.C.S.E., of a son.

OWEN.—On the 14th inst., at Kent Lodge, Southsea, the wife of Alfred Lloyd Owen, M.D., of a son.

SMITH.—On the 22nd inst., at Bath-street, Glasgow, the wife of David Smith, M.D., of a son.

STOCKWELL.—On the 20th inst., at Grove House, Batley, the wife of George Stockwell, L.R.C.P.Ed., of a son.

SUTCLIFF.—On the 12th inst., at Great Torrington, the wife of Edward Sutcliff, M.D., of a daughter.

MARRIAGES.

GERATY—UNTHANK.—On the 25th inst., Thomas Geraty, Esq., M.R.C.S.E., Nottingham, to Catherine, second daughter of Anthony Unthank, M.R.C.S.E., Nottingham.

STONEY—DROUGHT.—On the 6th inst., at St. Ann's, Dublin, Andrew Acres Stoney, L.R.C.S.I., Deputy Surgeon-General, Army, to Mary Frances, daughter of the late J. A. Drought, Esq.

WAKHAM—SPENCER.—On the 26th inst., at St. Bartholomew's, Sydenham, by the Hon. and Rev. Augustus Legge, Edith Maria, elder daughter of Joseph Huntley Spencer, of High Wickham, Hastings, and London, to William Johnson Wakham, M.B., F.R.C.S.E., of Weymouth-street, Portland-place.

DEATHS.

ABSOLON.—On the 17th inst., at Perth, George Webster Absolon, M.D., aged 50.

BROWNE.—On the 26th ult., at Kingston, Jamaica, of yellow fever, Nesbitt Peter Browne, M.B., C.M., of Bandon, Co. Cork.

COOPER.—On the 17th inst., at Burlington-buildings, Redland-park, Bristol, William Cooper, L.R.C.P.L., aged 46.

ROOTS.—On the 18th inst., at Kingston-on-Thames, Wm. Sudlow Roots, F.R.C.S.E., aged 71.

WIMBERLEY.—On the 13th inst., at Camberwell, F. W. Wimberley, M.R.C.S.E., late of Brinklow, aged 33.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

THE CASE OF CHARLOTTE HAMMOND.

THE Relief Committee of St. George's, Hanover-square, purpose to cut the Gordian knot of their difficulties by getting rid of the medical officer who had the audacity to call public attention to the case of Charlotte Hammond. They assign as a reason for moving the Local Government Board to depose Mr. Fenton, that he discharges his duties in a manner "generally unsatisfactory," and call special attention to "his conduct in the case of Charlotte Hammond." What the Committee actually mean came out in the course of the discussion when the Report was adopted. "The Committee felt it would be quite impossible to carry out the duties assigned to them with Mr. Fenton, who had studiously set their orders at defiance, and seemed to have gratification in causing sensational cases like that of Charlotte Hammond." The Relief Committee of St. George's parish is not the first corporation which has found it unsatisfactory to be associated with an earnest, outspoken man; but that is no reason why a medical officer who tries to discharge a difficult duty with credit to himself and justice to the poor should be displaced. We have no doubt the Local Government Board will reject the appeal of the Committee.

Equitas.—The answer depends on a variety of circumstances known to our correspondent, and not to us. He is a better judge than we can be.

Mr. B. B. Jackson.—The fee does not exceed the sum named.

"MANCHESTER WORKHOUSE."

To the Editor of THE LANCET.

SIR,—Dr. Hardie's letter in your journal of to-day points to a misapprehension which may exist in other minds after the paragraph in THE LANCET of the 15th. It was the workhouse of the Chorlton Union to which that paragraph referred; and although a considerable portion of the city of Manchester is comprised in the Chorlton Union, the guardians of the latter are a different body from those of Manchester, whose workhouses are the establishments spoken of by Dr. Hardie. Your obedient servant,

Manchester, July 22nd, 1876. E. H. P.

CHOLERA IN SYRIA.

FROM an official report just issued we gather some particulars of the outbreak of cholera last year in Beyrout and neighbourhood. The epidemic, after running its course in the Orontes valley, spread to Damascus, causing the suspension of business there, and the flight of the majority of the Christian and Jewish inhabitants, besides many Moslems, to the neighbouring mountains of Lebanon and Anti-Lebanon. On the appearance of the disease in Beyrout, a severe panic ensued, and nearly three-fourths of the population, about 40,000 in number, escaped to the mountains. Business was entirely suspended; the tribunals, workshops, stores, and offices were closed, and the city presented a desolate and deserted appearance. To complete the injury to trade, the ports of Palestine, Egypt, and Cyprus placed a prohibitory quarantine on arrivals from Syria, and direct communication with those countries, save by telegraph, was cut off for many months. Quarantine precautions were, moreover, permitted by the authorities to be imposed in many instances by such towns and villages of the country as chose to adopt them at their own expense; while in other cases prohibitory quarantine regulations were arbitrarily imposed by the authorities themselves upon arrivals by sea as well as by land. To such an extent was this facility for establishing quarantine indulged in that villages of the Lebanon, many within an hour's walk of Beyrout, placed persons and provisions coming thence in six days' quarantine, which, in the total absence of any kind of lazarette, had perforce to be passed in the open air, to the detriment of health and the general increase of sickness. The inefficiency of such measures became apparent in the breaking out of cholera in a large, overcrowded village 2200 feet above the sea level, which had become notorious for the extreme precautions there adopted against infection. Besides the epidemic of cholera, which visited in turns most parts of Syria, the public health was far from satisfactory. At Damascus virulent fevers took the place of cholera, while in the district of Baalbec typhus prevailed. The overcrowded villages of the mountains suffered much from sickness, owing to the want of proper sanitary precautions. Tripoli again was ravaged during the entire summer and autumn by small-pox and fevers, which were so common that the conveyances in some parts ceased to run, the drivers being stricken down.

Visyists will find that we have already replied to her question.

MEDICAL ETHICS.

To the Editor of THE LANCET.

SIR,—I should be glad to have your opinion on the undermentioned circumstances, which lately occurred in this neighbourhood.

On the 18th of March last I was requested, in conjunction with Mr. Pearce, surgeon, of Rotherham, to visit some children at Kiveton Park, who had been pronounced by a Mr. Powell, an out-door, unqualified assistant to Mr. Fleming, of Harthill, surgeon to the Kiveton Park Colliery, to be cases of "foot-and-mouth disease," originating from milk derived from cows suffering from that affection. Mr. Fleming had never seen the cases. Mr. Pearce and I conjointly examined the patients, and both gave it as our decided opinion that they were cases of simple aphthæ. As the farmer who supplied milk to the colliery did so to the extent of £4 per diem, he was naturally anxious to have the matter thoroughly cleared up, none of his cows suffering from foot-and-mouth disease. Upon the strength of our opinion he demanded an apology from Mr. Powell. No apology being forthcoming, legal proceedings were instituted. Mr. Powell did not await the issue, but fled the district. Mr. Fleming has thought proper to take offence at my action in this matter, although formerly we were on friendly terms.

On Monday, the 17th inst., I was asked by the cashier of the Kiveton Park Colliery, who came to my house in a conveyance belonging to the Colliery Company, to see a lad who had been run over by a truck. On being informed that Mr. Fleming was not at home, and that his new assistant considered amputation necessary, I immediately proceeded to the colliery, accompanied by my partner, Dr. Gowan. I found the lad suffering from a compound comminuted fracture of the upper third of the tibia, involving the knee-joint, and rendering amputation imperative. I performed amputation at the lower third of the thigh, assisted by Dr. Gowan and Mr. Fleming's assistant, previously giving the assistant the option of operating for his principal, which he declined. I refused any remuneration, stating that I was glad to do what I could to oblige a neighbour. Since then, though Mr. Fleming has several times seen the patient, neither Dr. Gowan nor I have received the least acknowledgment of our services from Mr. Fleming.

I should consider it a favour if you would give me the benefit of your experienced opinion on the matter, as certainly something more than a misunderstanding must have actuated such conduct.

I am, Sir, yours faithfully,

CHAS. M'CASKIE, L.R.C.P. & S. Edin.

Aston, Rotherham, July 20th, 1876.

*** We can see nothing but what was right in Mr. M'Caskie's conduct in the first case, and nothing in the second but what was friendly and neighbourly, calling for acknowledgment on the part of Mr. Fleming. The first case is another illustration of the evil of giving unqualified assistants too much licence.—ED. L.

THE RIVER BRENT.

A CORRESPONDENT of *The Times* writes as follows:—

"Remembering the sad effects of the outbreaks of typhoid fever, which were distinctly traced to the pollution of water by sewage, it may be well to direct your readers to the condition of the river Brent. The sewage of High Barnet is, by recent arrangements, passing in considerable quantities into this stream. Flowing as it does through the parishes of Hendon, Finchley, Totteridge, &c., all of which contribute largely to the supply of milk in London, it is only fair that metropolitan consumers should hear of this source of danger to themselves and their families."

Mr. W. A. Lee.—Every information may be obtained on application to the Secretary.

ŒDEMA OF GLOTTIS; RAPIDLY FATAL.

AT a meeting of the Medical Society of the Hospitals of Paris, M. Laveran mentioned the following case:—On Feb. 12th last a young soldier was seized with tonsillitis and œdema of the right pillar, but with no aphonia. The next day he seemed well again, but caught a slight cold in a draught. Thereupon he was seized with dyspnœa, sat on his bed, called for assistance, and was dead in fifteen minutes. On examination, the right arytenoido-epiglottic fold was found thickened, swollen, and obstructing the entrance into the larynx. The tonsils were red, inflamed, and enlarged, and the posterior pillar thickened by serous infiltration. M. Brouardel mentioned an analogous case in a medical student, who recovered from a first attack, but died suddenly in a second.

Alpha.—1. Dr. Macpherson's work.—2. We are not acquainted with any separate work on the subject of Health Resorts in this country.—3. Beale's work on the Microscope.

Mr. T. H. Thompson.—The paper has not been received.

ACUTE LARYNGITIS FROM LODGMENT OF SOLID NITRATE OF SILVER IN PHARYNX; TRACHEOTOMY; DEATH.

To the Editor of THE LANCET.

SIR,—MRS. S——, aged sixty-two, on the 6th of May, about 11 P.M., just before going to bed, swallowed what she supposed to be an antibilious pill. She immediately fancied it had stuck in her throat. From time to time she tried to get rid of it by drinking a little water, which, however, had no effect. She soon felt a burning sensation in her throat, which increased rapidly. It was not till nearly three hours after that it was discovered that a small piece of caustic had been taken by mistake for the pill. Immediately this was known, the usual antidotes were given, and for the next four days while she lived I saw her several times a day, and Dr. Cock, of Queen's-road, also saw her frequently in my absence.

Next morning, May 7th, the throat was much swollen, and before evening the swelling had increased rapidly, extending from the chin to the sternum; the burning sensation in the throat continued; the breathing became difficult; and inability to swallow even a teaspoonful of liquid, the attempt causing sudden fits of coughing, the fluid apparently entering the larynx, and being at once ejected. There was acute pain at the upper part of the pharynx, but more severe on the left side, considerable œdema of the neck, fauces injected, and salivation most profuse. No tenderness complained of in the region of the stomach. Pulse 100; respiration 35; temperature normal.—11 P.M.: Breathing much more difficult; can only speak in a whisper; pulse weak, rapid; a crisis evidently impending. My friend Dr. Cock, who visited her at this hour, opened the trachea. This was done under chloroform, and afterwards artificial respiration resorted to for a few minutes; the blood flowing from the wound, which previously was almost black, soon became red, and the pulse improved considerably.

On the morning after the operation I saw her at 7 A.M., and found her breathing easily; had slept nearly two hours; little salivation, but a considerable quantity of mucus escaping through the tube; still complete inability to swallow, every attempt made with the same result of instant ejection through the tube. Enemata given every two or three hours, consisting of beef-tea, broth, milk, with small quantities of brandy and sherry. In the course of this day she slept at intervals, and said she felt comfortable, but weak.

May 9th.—7 A.M.: Slept but little.—11 A.M.: Had an enema of castor oil, as the rectum felt loaded. This acted freely; afterwards the nutritive enemata were continued. Pulse 100; respiration 30; temperature 98·6°.—11 P.M.: Cough troublesome, and continued ejection of mucus; feels weak, restless, and anxious for sleep. Had half a grain of morphia in the enema.

10th.—7 A.M.: Slept five hours, and expresses herself as much better; swelling of neck quite gone.—9.30 A.M.: Continued inability to swallow; ice relieves thirst, but the melted water is obliged to be returned. At this time, most anxious to have food, she made an effort to swallow some beef-tea, as she said she did not feel much strength from the enemata. Immediately a violent fit of coughing came on, which continued at intervals, the breathing from this time becoming more and more difficult. She died at 3 P.M.

Sectio cadaveris, twenty hours after death (permission only granted to examine throat).—Body well nourished; rigor mortis well marked. The pharynx and larynx were removed, with the trachea and œsophagus as low as the sternum. On opening the œsophagus and pharynx from behind, a dark-coloured mass, about the size of a hazel-nut, was noticed, which on section proved to be corroded tissue, enclosing a coagulum of blood. This was situated at the outer side of the left arytenoid cartilage, and the left arytæno-epiglottidean fold was destroyed at its arytenoid attachment; continuous with this was a corrosive patch in the larynx on the left side, extending down to the superior vocal cord; the tissues all around were much thickened on the same side, the result being that the epiglottis was prevented from closing. No trace of the action of the nitrate was found lower down the œsophagus.

Remarks.—It is important in this case to note the mode in which the piece of caustic was taken. She stated that taking up the little pill-pox, and seeing that there was only one in it, she threw the supposed pill with a jerk from the box into her throat. The impetus thus given to it, no doubt, caused it to strike on the pharynx, and there lodge and remain (no water was taken with it, nor till some little time after), gradually dissolving and coagulating the albuminous tissues, and so was surrounded and held fixed till completely dissolved. It would probably have been easy to dislodge it in the first instance had suspicion been sooner entertained. The corrosion of the larynx must have been secondary to the destruction of the pharynx, being much less extensive. One can easily understand fluid passing into the larynx in this case; for not only were there stiffness and loss of sensibility, but, in addition, mechanical obstruction in the form of a mass of coagulated blood, effectually preventing the epiglottis from more than half closing. As regards the operation, life was evidently prolonged three days, and on the third day it was arranged to feed by means of a catheter through the mouth, when unfortunately, by a sudden attempt to swallow, a violent fit of coughing took place; the breathing, which was previously easy, became difficult, and, at all times a weak, delicate woman, she sank rapidly.

I remain, Sir, yours truly,

New-cross-road, July, 1876. J. ANDERSON, M.D.

HYGIENIC VENTILATING WATERPROOF COAT.

THE "ventilating coat" has been submitted to us by Messrs. Anderson and Co., Victoria-buildings, Queen Victoria-street, E.C. The aim of the invention is to render india-rubber garments healthy to wear by securing free transpiration for the body while encased in a water-tight fabric. For this purpose ribs, of a soft pliant material, are introduced between the back and shoulders of the wearer and the corresponding parts of the inside of the coat; the ribs raise the coat a clear quarter of an inch from the back and shoulders; the spaces between the ribs form a flue or channel up which heated air ascends to the collar, whence it escapes: thus securing the same comfort as is experienced in the wear of an ordinary porous material.

FOREIGN UNIVERSITIES.

THE University of Upsala (Sweden) will celebrate in September of next year the 400th anniversary of its existence. It is said that the first Siberian University will be shortly founded at Tomsk.

Mr. H. J. Leonard.—It is against our rule to recommend a particular surgeon.

RINGWORM.

To the Editor of THE LANCET.

SIR,—I send you the following notes of a case for publication, should you think them worthy.

Walter C——, aged six years and a half, came to my surgery on May 22nd, 1876. The mother said she saw it first on the child's head "as a pimple, with a ring round it about the size of a fourpenny-piece," and about two months ago. She has tried "white copperas" night and morning, as she was "afraid of his gittin a raw." The appearance of the head is as follows:—Two ringworms on occiput, the larger about two inches and a half in diameter, the smaller about an inch and three-quarters, both ovoid in form; two on right parietal, about an inch in diameter, behind and just above level of lobe of ear; one on left side opposite these, and about the same size; two on the crown about the centre of sagittal suture. All are ovoid in form, and from two-thirds to three-fourths of an inch in diameter. There is also a small circular one just below the hair on left temple, about the size of a shirt-button. I applied with a brush pure liquid carbolic acid all over the two largest ones, as well as to the small one on the temple, which caused a little pain to the child for about ten minutes, but not enough to make him cry. Within half a minute of applying it the places became blanched. I told the mother to take the boy home, and in the morning to wash the head with tepid water (no soap).

May 23rd.—Applied to three more. Those I applied to yesterday appear scaling. To cut all the hair off close to the head, and to take some iron mixture.

24th.—Applied to eight more.

27th.—Applied to four more, all varying from one-half to one-eighth of an inch in diameter.

30th.—Applied to four more, and to use zinc ointment with carbolic acid (half a drachm to an ounce) night and morning all over the scalp.

June 6th.—Applied to the smaller of the two I touched on the 22nd, as it looked reddish round the edges.

12th.—All look scaling like bran; no redness now. I should say the hair was short, barely one-eighth of an inch over the places, when I first saw the boy, and but for this and its redness the head looked as if attacked with tinea decalvans. The places were all on the head, except two, which were on the face, and were all slightly raised.

I think, Sir, the above treatment by pure carbolic acid speaks for itself, especially as I have already taken up too much of your valuable space.

I remain, Sir, yours truly,

Greenhithe, July 3rd, 1876. EDWIN TIPPLE, L.R.C.P. Ed., &c.

THE USE OF ICE IN EPILEPSY.

M. CHARCOT has followed Dr. Chapman's footsteps as to the use of the ice-bags, the cases not being altogether identical. M. Charcot's patients were hystero-epileptic, and experienced actual ovarian aura. He tried an ice-bag over the ovarian region, especially where the pulse was rapid and the palpitations very painful. The bag was left for half an hour, an hour, or an hour and a half, night and morning, with good results. M. Ferréol was equally successful in cases of ovarian hyperæsthesia by leaving the ice-bag two hours over the ovarian region three times a day. One case presented unusually severe symptoms, but was well in a fortnight.

Dr. Shingleton Smith is thanked.

HYDATID CYST IN THE BLADDER.

To the Editor of THE LANCET.

SIR,—As our local journal is in abeyance, I send you an account of a post-mortem where an hydatid cyst was found in the bladder. I never met with such a case before, nor have I yet met anyone who has. In 1866 the subject had a swelling under the liver and symptoms of atrophy; in 1868 the tumour disappeared, and she got better health and menstruated at the end of 1873; in 1874 the tumour reappeared, and early in 1876 the abdomen began to increase in size and the health to suffer. On July 3rd I drew twelve pints of reddish serum, thickening towards the last, from the peritoneum. It soon refilled. Mr. George Fortescue saw her with me on July 27th. We were shown a white globular sac about four inches in diameter, said to have come from the bladder. As there had been no irritability about the bladder, we doubted this, and concluded it came from the uterus. She gradually got worse, and died Sept. 26th, aged fourteen.

Post-mortem, performed by myself and Dr. Aberdein Jones. Body emaciated, tissues pale, superficial veins over abdomen much enlarged, lungs contained tubercles, liver and uterus normal. The cyst on the right side was extra-peritoneal and attached to the liver, colon, cæcum, and ovary; the wall black, tough, and thick; it contained thick pus full of reddish hydatids pointed at each end, varying in size up to three inches long by one inch in diameter. The peritoneal cavity was full of serum and contained transparent cells and hydatids of all sizes; the bladder was healthy, the mucous membrane sound; it contained a cyst about four inches in diameter, containing clear fluid.

I remain, Sir, yours &c.,

Belmain, N.S.W., May 29th, 1876. OWEN SPENCER EVANS.

INJECTION OF ATROPINE IN TRISMUS.

At a late meeting of the American Neurological Association, Dr. Shaw described a case of hysterical trismus that yielded very readily to the use of hypodermic injections of atropine. The patient was a German girl, who had a penetrating wound of the foot, caused by a nail. Trismus supervened, and, although the integument was removed in the neighbourhood of the cicatrix, no relief was obtained. The patient was given hypodermic injections of atropine, and within twenty-four hours was relieved. Periodically fresh attacks would occur; but in every case there was a relief of the symptoms after the use of the drug. It was found necessary to administer the remedy in sufficiently full doses to produce delirium.

Mr. F. R. Henham, (Ontario, Canada.)—We would recommend our correspondent to communicate with Dr. Wall, General Hospital, Calcutta. The value or otherwise of our correspondent's remedy for snake-bite could be tested by the Commission appointed to investigate that subject.

Delta.—Consult a surgeon.

"RENAL PULSE."

To the Editor of THE LANCET.

SIR,—I have much pleasure in replying to your correspondent, "G. H." of last week, who wishes to know what I mean by a renal pulse, as quoted by me in a case of Cerebral Hæmorrhage recently published in your journal.

A renal pulse is one of tension, its degree varying according to the amount of thickening and contraction of the capillaries and arterioles, as also the amount of embarrassment or hypertrophy of the heart; and, of course, as to the nature of the renal affection, being greatest in the granular contracted kidney. Further, a pulse of high arterial tension, such as is met with in the granular kidney, will affect the expansion of the vessel, making it long and hard, small or large, as the case may be.

It follows, then, that the form of pulse is a most important feature in the diagnosis of renal disease. Indeed, in the case in question I had no sooner placed my hand upon it than I was satisfied I had a case of renal disease to deal with. The tension, easy manner in which I could roll it under my finger, feeling like a thin tendon, hard and cord-like, prominent, and traceable in its course up the forearm, left no doubt in my mind; and this diagnosis was confirmed by the post-mortem examination revealing granular contracted kidneys (and for a little time I was uncertain how far uræmia entered into the case).

Your correspondent further states that he carefully noted the pulse throughout the case in the hope of finding a solution to his difficulty, but was unsuccessful. Need I say this is scarcely to be wondered at, when he was merely seeing the effects of stimulation on it, diagnosis of renal disease having been made in the commencement.

I am, Sir, your obedient servant,
Worcester, July 24th, 1876. JAMES WILSON, M.D.

Inquirer.—There is always some doubt as to what might be held to be "reasonable excuse" for neglecting an obligation under an Act of Parliament. Section 20 of the Births and Deaths Registration Act of 1874 is, however, so explicit that a registered medical practitioner *shall* sign and give a certificate of the cause of death of a deceased patient, that we are not of opinion that the non-payment of an account for medical attendance on a deceased patient would be held as a "reasonable excuse" for withholding such certificate. The granting of these certificates is an obligation to the State, which could scarcely be affected by the relations between a medical attendant and the relatives of a deceased patient.

Mr. J. G. Gardiner.—Communicate with the Secretary of the College.

INDIA-RUBBER STOMACH TUBE.

To the Editor of THE LANCET.

SIR,—It was only yesterday that my attention was directed to your issue of July 15th, where a letter appears from Dr. Ward, drawing attention to the danger connected with the use of the ordinary stomach-pump, and in which he suggests that an *india-rubber* stomach-tube should be substituted for that in ordinary use. I find that in your issue of the following week Dr. Campbell writes to say that an *india-rubber* stomach-tube has been used at the Cumberland and Westmorland Asylum, Garlands, during the last two years. As many probably share Dr. Ward's opinion respecting the ordinary stomach-tube, it may perhaps be as well to draw attention to the fact that in February, 1874, a letter from me appeared in several of the medical journals, describing a modification of the stomach-pump, one of the peculiarities of which was an *india-rubber* stomach-tube, and in this letter I argued the feasibility of employing this material from the successful use which had been made of it in Thompson's india-rubber catheter.

Yours faithfully,
Exeter, July 25th, 1876. LOUIS H. TOSSWILL, M.B., &c.

A VIVISECTION SKETCH.

OUR friend and contemporary, *Punch*, has done a good cause a good turn this week, as all our readers will at once see who look at the leading cartoon. The professional baronets, Jenner and Paget, as well as Sir Henry Thompson, are admirably rendered, and the subject is treated with a facetious power that will aid vastly in ensuring the safety of science.

Dr. A. E. McRae.—We believe there is no fixed standard of fees to regulate the Procurator Fiscal in remunerating medical men for professional services. The Procurator Fiscal's accounts have to be passed first by the sheriff of the county, and afterwards by the Queen's Remembrancer's Office in Edinburgh—a branch of the Treasury which is apt to be grinding like other branches. Our correspondent's experience is valuable, as showing that where any particular fee is obviously inadequate, a juster one may sometimes be got by importunity and due representation.

Mr. R. Winzing, (Winchcombe.)—We are unable at the moment to recall the circumstance referred to. Probably our correspondent read the announcement elsewhere.

M.A., M.D.—We do not recall any authoritative decision by the higher Courts. County Court Judges vary much in their judgments, and, if we remember rightly, some of them have shown that they think that only licentiates of Apothecaries' Hall can recover for medicines; but this is an old-fashioned prejudice which an enlightened Judge would not entertain after reading the 31st section of the Medical Act. At the same time we shall be glad when men who are fortunate enough to hold University degrees cease to try to recover for medicines *per se* in law courts.

H. A. B.—We do not share the views of our correspondent.

MEDICAL SERVICE IN INDIA.

To the Editor of THE LANCET.

SIR,—Will you warn Mr. Hardy's candidates of the necessity of their having a clear understanding with the Government that their pay is to be given to them in sterling coin of the realm, and not in the clipped rupee, which is now worth 1*s.* 6*d.* instead of 2*s.*, and may within six months not be worth 1*s.* 6*d.* The 317*r.* 8*s.* which they are to receive in India is not worth £31 15*s.*, as erroneously stated in the last production on the subject from the War Office, but £26 17*s.*, and will most likely soon be less.

I am, Sir, yours &c.,
June, 1876. A VICTIM.

To the Editor of THE LANCET.

SIR,—There is an important point which escapes the notice of candidates for this service. It affects surgeons who, having less than three years' service in India, are so unfortunate as to be compelled to take sick furlough to Europe. Paragraph 8 states that no absentee can draw less than £350 per annum; but experience shows that this rule only applies to persons entitled to furlough. A local order compels an officer who has less than three years' service to vacate his appointment on proceeding on sick furlough under the 1868 regulations. He must then go on "unemployed" pay, and he will receive 10*s.* per day while in Europe, as shown in the succeeding paragraph of regulations. Under the new furlough rules, dated December 31st, 1875, which all surgeons now joining the service must accept, the time is shortened to two years; but no provision whatever is made for officers having less than two years' service who may be compelled to go home on sick furlough; they do not appear to be even entitled to the 10*s.* per pay allowed under the 1868 rules. At first 10*s.* a day seems a fair provision; but when it is remembered that the surgeon has to pay his own passage and railway expenses back to his station in India, the Government only providing the passage one way, the regulation is a hard one. Several young surgeons have recently had the misfortune to return to England under these circumstances; they have all been agreeably surprised on receiving such liberal treatment. Intending candidates should inquire further into the matter.

Yours &c.,
June, 1876. VERITAS.

To the Editor of THE LANCET.

SIR,—I enclose an extract from a Bombay paper, showing the effect of a recent order in the financial department on the pay of officers in civil employ who entered the service prior to 1864. The table given by the *Statesman* refers to the 23 first-class civil stations at the Bengal side, including the North-West Provinces (Punjab, Oudh), the Central Provinces, and the Native States in Central India (Rajputana and Hyderabad). There are, in addition, about 98 second-class civil stations in the same territories to which lower rates of pay apply, and the loss with reference to pay of rank of officers in charge of such stations whose service dates anterior to 1864 I give in the following table:—

Years' Service.	Pay of Rank.	Consolidated Pay for second-class Civil Station.	Loss.
	r. *a.* *p.*	*r.* *a.* *p.*	*r.* *a.* *p.*
25	1093 2 0	950 0 0	143 2 0
20	1056 9 7	950 0 0	106 9 7
15	825 11 5	750 0 0	75 11 5
12	789 3 0	750 0 0	39 3 0

Thus, civil surgeons who have toiled some twenty years in small or second-class districts find that their reward decreases as their service increases.

Private practice has been pointed to as a set off against the loss, also pay for extra appointments. The former, with respect to natives in the majority of districts, is *nil*; and I know civil surgeons who have not received a rupee a year from Europeans. A trifle from either source is all that can be expected, and that trifle is always well earned. The allowance for the charge of a gaol, the only extra appointment, is usually 50 rupees.

The effect of this order on the zeal of officers who deserved more liberal treatment can perhaps be imagined.

Yours faithfully,
India, June, 1876. AN OLD SUBSCRIBER TO THE LANCET.

To the Editor of THE LANCET.

SIR,—In your annotations you quote the new regulations for the admission of candidates into the army medical department, as offering 317*r.* or 433*r.* (according to length of service) to those of the successful competitors who may be sent to India. Intending candidates should be warned that these sums, at the present rate of exchange, represent respectively, not £31 14*s.* and £43 6*s.*, but £26 10*s.* and £36., and that there seems every prospect of the value of the rupee, as compared with English currency, sinking still further. They should also be made aware that their first five years will be almost certainly spent abroad, and most probably in India, the whole of the time on the lower rate of pay. Thus the fortunate young man who survives his term on five shillings per diem at Netley will find himself in India on £36 10*s.* a month, or £318 per annum, *inclusive of all allowances*. He will have to pay subscriptions to a mess and band, of which he may quite possibly never have the opportunity of entering the former or hearing the latter. He may be appointed to do duty with a detachment a hundred or more miles from the mess and band, to both of which he will, nevertheless, have the privilege of subscribing. As regards status, it can scarcely be doubtful how these short-timers will be looked upon both by military and medical officers.

Your obedient servant,
India, June 21st, 1876. A SURGEON-MAJOR.

ADVICE TO BATHERS.

WE are glad to observe that the Royal Humane Society has issued some excellent instructions for the guidance of bathers. Fatal accidents in the water have been unusually numerous this year, especially since the advent of the very hot weather, and the appearance of the notice of the Humane Society is most opportune. It cannot be too widely circulated:—

"Avoid bathing within two hours after a meal, or when exhausted by fatigue or from any other cause, or when the body is cooling after perspiration; and avoid bathing altogether in the open air if, after having been a short time in the water, there is a sense of chilliness, with numbness of the hands and feet; but bathe when the body is warm, provided no time is lost in getting into the water. Avoid chilling the body by sitting or standing undressed on the banks or in boats after having been in the water, or remaining too long in the water. Leave the water immediately there is the slightest feeling of chilliness. The vigorous and strong may bathe early in the morning on an empty stomach, but the young and those who are weak had better bathe two or three hours after a meal; the best time for such is from two to three hours after breakfast. Those who are subject to attacks of giddiness or faintness, and those who suffer from palpitation and other sense of discomfort at the heart, should not bathe without first consulting their medical adviser."

POISONING BY CARBOLIC ACID.

AS this acid is now so extensively used, it may be of some importance to make known the antidotes which have been proposed. M. Ferrand advises the following:—White sugar, 15 parts; water, forty parts; quicklime, 5 parts—forming a saccharate of lime.

An Old Subscriber (Dovercourt) would no doubt best attain his object by advertising.

Dr. Bell Pettigrew is thanked.

ERRATUM.—In our list of gentlemen who passed the Primary Examination at the College of Surgeons on the 14th, 17th, and 18th inst., the name of Mr. W. G. Burnie was associated with those of candidates from University College, whereas he should have been described as a student of St. Bartholomew's.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Broadbent, London; Dr. Brown-Séquard; Dr. Yeo, London; Mr. J. Gay, London; Dr. Blyth, Ilfracombe; Lieut.-General Bourchier, Brighton; Mr. Holden, Liverpool; Dr. Crichton Browne, Dumfries; Mr. Brewer, Abervillery; Mr. Gardiner, Edinburgh; Mr. Hamilton, London; Dr. J. B. Pettigrew, St. Andrews; Dr. Lovett, London; Dr. Henry, London; Dr. M'Caskie, Auston; Mr. Hime, Sheffield; Mr. Lee, Cwm Avon; Mr. Leonard, London; Messrs. Burgoyne, London; Mr. Pasmore, Cadleigh; Mr. Jackson, Glasgow; Dr. Gillebrand, Liverpool; Mr. Speedy, Dublin; Mr. Heath, Southport; Dr. Sullivan, Ilford; Mr. Midgley; Dr. S. Smith, Clifton; Mr. Scott, London; Mr. Poynder, London; Dr. Leftwich, London; Mr. Murray, Brixton; Mr. Scott, Dublin; Mr. W. De Rozario, Punjab; Dr. Knott, London; Mr. Gallin; Mr. Ward; Mr. W. Ramskill, Burnley; Mr. R. McRae; Mr. H. Pearce, Nottingham; Mr. Morgan, Darlington; Mr. H. Robertson, Southampton; Mr. Brown, Dudley; Mr. Peters, Bradford; Mr. Edwards, Leicester; Mr. Thomsett, Newcastle; Mr. Morgan, London; Mr. Newby; Mr. Winning, Winchcombe; Mr. B. Winstanley; Mr. Broad, Lincoln; Mr. W. Kelly, Bristol; Mr. Nissen; Mr. R. Colline; Messrs. Marlborough and Co.; Mr. Burnie, Bradford; Mr. R. Johnson; Mr. King; Mr. Davis; Dr. Lewis, Wakefield; Mr. Tosswill, Exeter; Dr. Wilson, Worcester; Mr. Darling, Manchester; Mr. Morris; Mr. Guy, Scarborough; Mr. Wynne, Eccleshall; Mr. Keene; Mr. Horton, Manchester; Dr. Thompson, Gilfach Goch; Mr. Thomas, Glasgow; Mr. Cross, Tottenham; Dr. Symonds, Croyland; Mr. Harris, Bristol; Mr. Robinson; Mr. Haynes, Birmingham; Rev. A. F. Thomson, Dinard; Mr. Crane, Letterkenny; The Director-General of the Medical Department of the Navy; Alpha; F. G. H.; An Old Subscriber to THE LANCET; Experience; A Surgeon Sold; Virginia; A Doctor; E. H. F.; A Surgeon-Major; Militia Surgeon; The Secretary of the Hospital Saturday Fund; Delta; M.R.C.S., Chester; The Liverpool Liberal Association; Inquirer; L. M.; The Registrar-General of Edinburgh; M.R.C.S., L.A.C.; M.D.; C. R. T., Kendal; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Proctor, Shifnal; Mr. Cairns, Wakefield; Mr. Murrell, Acton; Mr. Cox, Brighton; Dr. Lister, Newton-le-Willows; Mr. Marsh, Falham; Mr. Bunting, Sneinton; Mr. Savidge, Twycross; Mr. Greenslade, Rocester; Mr. Creten, Birkenhead; Messrs. Smith and Son, Dublin; Dr. Burder, Bristol; Mr. Booth, Preston; Dr. Dobell, London; Dr. Richmond, Northallerton; Mr. White, London; Mr. Garbutt, Dunston; Mr. Hartness, Whitehaven; Dr. Grant, Longton; Mr. Bloxham, Halesowen; Mr. Evans, Seaford; Mr. Young, Chilton Polden; Nimrod; Surgeon; Lipoma; Micros; Dalston; D. D. C., Carnforth; Medicus, London; C. B. A.; L.R.C.P., Leamington; B. M.; R. E., Swansea; J. S.; R. H. G.; A. R., Langport; Assistant; Medicus, Edinburgh; V. R., Shaftesbury; W. D., Thame; W. P. D., Clifton; A. B. C., Woolwich; F. W., Wakefield.

Manchester Guardian, Broad Arrow, Welshman, Solicitors' Journal, Sunday Times, Pharmaceutical Journal, Colonies, Academy, Land and Water, Examiner, Spectator, Liverpool Daily Post, Metropolitan, East London Observer, Surrey Advertiser, Cork Constitution, Sunday Press and Mirror, Shield, Leeds Mercury, Pioneer (Allahabad), *Macclesfield Advertiser, Record, Sussex Daily News, Brighton Guardian*, and *Temperance Record* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, JULY 27TH, 1876.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
July 21	30·21	E.	63	67	99	83	60	...	Hazy
" 22	30·09	S.E.	65	72	119	90	62	...	Hazy
" 23	29·98	S.S.W	63	67	98	72	55	...	Cloudy
" 24	30·00	N.E.	57	60	98	71	57	0·08	Overcast
" 25	30·20	N.E.	59	66	110	84	57	...	Hazy
" 26	30·09	W.	59	64	118	86	58	...	Fine
" 27	30·03	N.	54	63	105	73	59	...	Fine

Medical Diary for the ensuing Week.

Monday, July 31.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 1.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 2.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M

Thursday, Aug. 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Aug. 4.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 5.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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